



PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

SHEILA C. HOLMAN
Director

November XX, 2016

Mr. Hugh C. Welsh
President
Greenville Service Company, Inc.
5900 Martin Luther King Jr. Highway
Greenville, North Carolina 27835-1887

SUBJECT: Air Quality Permit No. 05754T96
Facility ID: 7400021
Greenville Service Company, Inc.
Greenville, North Carolina
Pitt County
Fee Class: Title V
PSD Status: Major

Dear Mr. Welsh:

In accordance with your completed Air Quality Permit Application for renewal and minor modification of your Title V permit received April 24, 2015, we are forwarding herewith Air Quality Permit No. 05754T96 to Greenville Service Company Inc., 5900 Martin Luther King Jr. Highway, Greenville, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the conditions of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested.

This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Increment tracking does not apply to this renewal. Although Pitt County's minor source baseline for NO_x has been triggered; there are no emissions increases or decreases associated with this change.

This Air Quality Permit shall be effective from November XX, 2016 until October 31, 2021, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Richard R. Simpson, at (919) 707-8476 or Richard.Simpson@ncdenr.gov.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

cc: Heather Ceron - EPA Region IV
Robert Fisher, Supervisor, Washington Regional Office
Central Files
Connie Horne (cover letter only)

Insignificant Activities under 15A NCAC 02Q .0503(8)

Emission Source ID No.	Emission Source Description
Building Number 1 (ID No. B1)	
I-B1-63298	Sterile Products Department (SPD) - room fugitive emissions with fabric filter with 486 square feet of filter area (ID No. 63298)
I-B1-66228	Sterile Products Department (SPD) - miscellaneous manufacturing operations with fabric filter with 486 square feet of filter area (ID No. 66228)
I-B1-0262	Sterile Products Department (SPD) - room and equipment clean-up with fabric filter with 112 square feet of filter area (ID No. 63501)
I-B1-125010	OT - DMS Suite dust collection system with fabric filter with 3616 square feet of surface area (ID No. 125010)
I-B1-128981	OT - room M2-244 with fabric filter (ID No. 128981)
I-B1-66955	OT - packaging line 5 with fabric filter (ID No. 66955)
I-B1-65037	OT - packaging line 21 with HEPA filter installed on fabric filter (ID No. 65037)
I-B1-65038	OT - packaging line 22 with HEPA filter installed on fabric filter (ID No. 65038)
I-B1-65039	OT - packaging line 23 with HEPA filter installed on fabric filter (ID No. 65039)
I-B1-67372	OT - packaging line 25 with HEPA filter installed on fabric filter (ID No. 67372)
I-B1-67373	OT - packaging line 27 with HEPA filter installed on fabric filter (ID No. 67373)
I-B1-67374	OT - packaging line 26 with HEPA filter installed on fabric filter (ID No. 67374)
I-B1-47846	OT - packaging line 10 with fabric filter (ID No. 47846)
I-B1-60009	OT - room M2-84 with fabric filter (ID No. 60009)
I-B1-61188	OT - SSPD 1-28-11 with fabric filter (ID No. 61188)
I-B1-61189	OT - SSPD 1-28-13 with fabric filter (ID No. 61189)
I-B1-61190	OT - SSPD 1-28-13 with fabric filter (ID No. 61190)
I-B1-61191	OT - SSPD 1-28-14 with fabric filter (ID No. 61191)
I-B1-61193	OT - SSPD 1-28-46 with fabric filter (ID No. 61193)
I-B1-129375	OT - Building 1; Room 12830 with Torit Dust Collector (760 square feet of filter area) (ID No. 129375)
I-B1-M2-83	Room M2-83 exhaust with associated fabric filter with 640 square feet of filter area (ID No. CD111278).
I-B1-45091, I-B1-08141, I-B1-08142, I-B1-00961, and I-B1-0960	Solid Dose Formulation - five mixers with fabric filter with 3,616 square feet of filter area (ID No. 111072)
I-B1-2-84	Solid Dose Formulation - room exhaust with fabric filter with 3,616 square feet of filter area (ID No. 111072)
I-B1-M2-86	Solid Dose Formulation - room exhaust with fabric filter with 3,616 square feet of filter area (ID No. 111072)
I-B1-M2-79	Solid Dose Formulation - Drug Room M2-79 mixing system with fabric filter with 486 square feet of filter area (ID No. 67541)
I-B1-69650	Solid Dose Formulation - active ingredient solution tank loading area exhaust Film Coating Room D-Room, M2-81B with fabric filter (ID No. 69650)
I-B1-26-011	Solid Dose Formulation - Room M2-83 solution tank with fabric filter with 640 square feet of filter area (ID No. 111278)
I-B1-14-004	Solid Dose Formulation - Room M2-83 granulation mixer with fabric filter with 640 square feet of filter area (ID No. 111278)
I-B1-14-006	Solid Dose Formulation - Room M2-83 comill with fabric filter with 640 square feet of filter area (ID No. 111278)
I-B1-67807	Solid Dose Formulation - blending/sifting facility blender with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69798)
I-B1-60656	Solid Dose Formulation - blending/sifting facility quadro mill with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69798)
I-B1-49553	Solid Dose Formulation - blending/sifting facility Finex sifter with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69798)

**ATTACHMENT 1 to cover letter of Permit No. 05754T96
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Emission Source ID No.	Emission Source Description
I-B1-65613	Solid Dose Formulation - blending/sifting facility blender with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69797)
I-B1-90914	Solid Dose Formulation - blending/sifting facility Finex sifter with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69797)
I-B1-111578, I-B1-111579, and I-B1-111580	Solid Dose Formulation - blending/sifting facility three sifters with Torit-type cartridge filter with 904 square feet of filter area (ID No. 69797)
I-B1-80509 and I-B1-80510	Solid Dose Formulation - two solution tanks with fabric filter with 650 square feet of filter area (ID No 80511)
I-B1-0251	Solid Dose Formulation - packaging area vacuum cleanup system with fabric filter 240 square feet of filter area (ID No. 0251)
I-B1-0270	Solid Dose Formulation - compressed area vacuum cleanup system with fabric filter 240 square feet of filter area (ID No. 0270)
I-B1-MX124252	Solid Dose Formulation - mixer in room M2-85 with fabric filter with 486 square feet of filter area (ID No. 61955)
I-B1-PL2	Solid Dose Formulation - packaging line 2 with HEPA filter and prefilter (ID No. PL2)
I-B1-PL7	Solid Dose Formulation - packaging line 7 with HEPA filter and prefilter (ID No. PL7)
I-B1-PL1B	Solid Dose Formulation - packaging line 1B with HEPA filter and prefilter (ID No. PL1B)
I-B1-PL1C	Solid Dose Formulation - packaging line 1C with HEPA filter and prefilter (ID No. PL1C)
I-B1-46445	Solid Dose Formulation - packaging line 2 with HEPA filter installed on fabric filter with 972 square feet of filter area (ID No. 46445)
I-B1-46447	Solid Dose Formulation - packaging line 5 with HEPA filter installed on fabric filter with 972 square feet of filter area (ID No. 46447)
I-B1-111574, I-B1-111575, I-B1-111576, and I-B1-111577	Solid Dose Formulation - four bottle filling machines located with two cartridge-type dust collectors (ID Nos. 123259 and 123260) with back-up Torit dust collectors (ID Nos. 111572 and 111573)
I-B1-68130 and I-B1-68131	Solid Dose Formulation - two solution tanks with 125 gallons each containing alcohol solution SD3A
I-B1-M2-77	Solid Dose Formulation – Room No. M2-77 dust collection system with fabric filter with a maximum air-to-cloth ratio of 1.13 (ID No. 130744)
I-B1-M2-77TANK	Solid Dose Formulation - six 250-gallon and two 300-gallon coating solution mix tanks in Room No. M2-77
I-B1-M2-86TANK	Solid Dose Formulation - 20 gallon ethanol/methanol/alcohol solution tank in Room No. M2-86
I-B1-123257	Solid Dose Formulation - Punch and Dye Shop dust collection system from Rooms M2-180 and M2-181 with fabric filter with 75 square feet of filter area (ID No. 123257)
I-B1-3, I-B1-4, I-B1-5, I-B1-8, I-B1-21, I-B1-22, I-B1-23, I-B1-25, I-B1-26, and I-B1-27	Solid Dose Formulation – ten packaging area room airlines with HEPA filters installed on fabric filters (ID Nos. 63104, 63105, 63106, 65037, 65038, 65039, 67372, 67374, and 67373)
I-B1-123267	Solid Dose Formulation - pneumatic transport system with cartridge filter (ID No. 123267)
I-B1-123259	Solid Dose Formulation - manufacturing operations in Rooms M2-61 through M2-65 and M2-67 through M2-74, with twelve HEPA filters installed one on each room with cartridge-type dust (ID No. 123259) with a back-up cartridge-type dust collector (ID No. 123260)
I-B1-32	Small Scale Production - compression area with fabric filter with 648 square feet of filter area (ID No. 32)
I-B1-33	Small Scale Production - capsule filling with fabric filter with 648 square feet of filter area (ID No. 33)
I-B1-34	Small Scale Production - large two step granulation with fabric filter with 648 square feet of filter area (ID No. 34)
I-B1-36	Small Scale Production - toxic compression with fabric filter with 648 square feet of filter area (ID No. 36)
I-B1-37	Small Scale Production - regular filling with fabric filter with 648 square feet of filter area (ID No. 37)
I-B1-38	Small Scale Production - toxic filling with fabric filter with 648 square feet of filter area (ID No. 38)

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I-B1-U, I-B1-V, and I-B1-W	Small Scale Production - Servac Room with fabric filter with 648 square feet of filter area (ID No. UVW)
I-B1-35	Small Scale Production - conventional granulation with cartridge filter with 904 square feet of filter area (ID No. 35)
I-B1-4114	Small Scale Production - Mepron production room tablet press operation with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-01089	Small Scale Production - Mepron production room Gemco blender with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-03906	Small Scale Production - Mepron production room Double Cone blender with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-46558	Small Scale Production - Mepron production room portable sifter with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-07485	Small Scale Production - Mepron production room Fitzmill U with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-41494	Small Scale Production - Mepron production room Fitzmill D with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-106471	Small Scale Production - Mepron production room microwave dryer with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-111014	Small Scale Production - Mepron production room liquid ring vacuum pump installed on microwave dryer with Torit pulse jet fabric filter with 904 square feet filter surface area (ID No. 111014)
I-B1-12836	Small Scale Production - toxic granulation room exhaust with cartridge filter (ID No. 61196)
I-B1-12814	Small Scale Production - room and equipment cleanup with fabric filter vacuum cleanup with 62 square feet of filter area (ID No. 12814)
I-B1-12835	Small Scale Production - non-toxic central area vacuuming system with fabric filter with 75 square feet of filter area (ID No. SSPDN-1)
I-B1-REX1	Small Scale Production - exhaust system with HEPA filter installed on a fabric filter (648 square feet of filter area) (ID No. REX1)
I-B1-REX2	Small Scale Production - exhaust system with HEPA filter installed on a fabric filter (648 square feet of filter area) (ID No. REX2)
I-B1-REX3	Small Scale Production - exhaust system with HEPA filter (4 square feet of filter area each) (ID No. REX3)
I-B1-REX4	Small Scale Production - exhaust system with HEPA filter (4 square feet of filter area each) (ID No. REX4)
I-B1-REX5	Small Scale Production - exhaust system with HEPA filter (4 square feet of filter area each) (ID No. REX5)
I-B1-65127	Ointments, Creams, and Liquids Formulation Division - Room M2-178, tri-blender hopper with fabric filter with 486 square feet of filter area (ID No. 65127)
I-B1-123256	Ointments, Creams, and Liquids Formulation Division - Polysporin Production dust collection system for Rooms M1-3, M-180, and M-181 with fabric filter 486 square feet of filter area (ID No. 123256)
I-B1-69247	Ointments, Creams, and Liquids Formulation Division - tri-blender/hopper in Room No. M2-174 with fabric filter 486 square feet of filter area (ID No. 69247)
I-B1-106259	Ointments, Creams, and Liquids Formulation Division - tri-blender/hopper in Room M2-172D with cartridge filter 486 square feet of filter area (ID No. 106259)
I-B1-45177	Ointments, Creams, and Liquids Formulation Division - dust collection system for Rooms M2-172A, M2-172B and M2-172C with fabric filter with 904 square feet of filter area (ID No. 45177)
I-B1-M1-24	Drug Stock Department - ventilator hood with fabric filter with 650 square feet of filter area (ID No. 61026)
I-B1-M1-26	Drug Stock Department - ventilator hood with fabric filter with 650 square feet of filter area (ID No. 61027)
I-B1-R1-10A	Drug Stock Department - ventilator hood with fabric filter with 650 square feet of filter area (ID No. 61027)
I-B1-R1-2	Drug Stock Department - fugitive emissions with fabric filter with 650 square feet of filter area (ID No. 61029)

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I-B1-49559	Drug Stock Department - Russel Sieve with fabric filter with 650 square feet of filter area (ID No. 61029)
I-B1-R1-9	Drug Stock Department - ventilator with fabric filter with 970 square feet of filter area (ID No. 60220)
I-B1-R1-9A	Sifting operation and fabric filter with 1520 square feet of filter area (ID No. DC-132142)
I-B1-08437	Drug Stock Department - large sifter with fabric filter with 970 square feet of filter area (ID No. 60220)
I-B1-49551	Drug Stock Department - room air from Room No. R1-3 (Russel Sieve) with fabric filter with 905 square feet of filter area (ID No. 125641)
I-B1-08885	Drug Stock Department - room air from Room No. R1-8 (Sifter) with fabric filter with 650 square feet of filter area (ID No. 743)
I-B1-47604	Drug Stock Department - exhaust from Room Nos. R1-15 and R1-16 (Sifter) with fabric filter with 2,712 square feet of filter area (ID No. 66948)
I-B1-47603	Drug Stock Department - exhaust from Room No. R1-11 (sifter) with fabric filter with 2,712 square feet of filter area (ID No. 66951)
I-B1-00747	Drug Stock Department - exhaust from Room No. R1-12 (sifter) with fabric filter with 2,712 square feet of filter area (ID No. 66951)
I-B1-65201	Drug Stock Department - room exhaust from Weighing Room No. M2-13 with fabric filter with 648 square feet of filter area (ID No. 65201)
I-B1-69753	Pharmaceutical Process Technology Support Department - tri-blender with Torit-type cartridge filter with 904 square feet of filter area (ID No. 111316)
I-B1-69696	Pharmaceutical Process Technology Support Department - 300 gallons capacity process tank with Torit-type cartridge filter with 904 square feet of filter area (ID No. 111316)
I-B1-204-1	Pharmaceutical Process Technology Support Department - tablet press with Torit-type cartridge filter with 486 square feet of filter area (ID No. 69830)
I-B1-QASA	Quality Assurance Sampling Area - two lab hoods and two dust pickup systems with fabric filter with 1,808 square feet of filter area and three parallel HEPA filters (ID No. QASA)
I-B1-51771	R/D - CC 70200-PRDL with fabric filter (ID No. 51771)
I-B1-57924	R/D - QA Drug sampling area with fabric filter (ID No. 57924)
I-B1-131635	Glatt Dryer, with a dust collector (ID No. 131634)
I-B1-Line 7 filling	Tablet filling Line 7 with an Aerodyne GPC-12 cyclone 13 inches diameter (ID No. I-B1-L7)
I-B1-R12855	Continuous Manufacturing Suite (R12855) with fabric filter with 2,280 square feet of filter area and associated HEPA filters (ID No. 132868)
I-B1-R12858	Continuous Manufacturing Suite (R12858) with fabric filter with 2,280 square feet of filter area and associated HEPA filters (ID No. 132868)
I-B1-R12858	Continuous Manufacturing Suite (R12858) associated with fluid bed dryer with Trema Cyclone 16 inches diameter (ID No. 132869)
Building Number 4, Power Plant (ID No. B4)	
I-B4-5617	fixed roof No. 2 fuel oil storage tank (20,000 gallons capacity)
I-B4-69715	fixed roof No. 2 fuel oil storage tank (100,000 gallons capacity)
I-B4-9351	fixed roof No. 2 fuel oil storage tank (100,000 gallons capacity)
Building Number 7 - Ointments, Creams and Liquid Formulations Division (ID No. B7)	
I-B7-CVS	central vacuum system with tubular filter with 102 square feet of filter area (ID No. CVS)
I-B7-68861	tri-blend hopper with fabric filter with 486 square feet of filter area (ID No. 68861)
I-B7-N-1 and I-B7-N-2	two 3,000 gallon isopropyl alcohol storage tanks
I-B7-69335	house vacuum system with fabric filter (ID No. 69335)
I-B7-Room 122	Compounding operation and fabric filter with 190 square feet of filter area (ID No. DC-01)
Building Number 8 - Analytical Development Laboratory and Pharmaceutical R&D Laboratory (ID No. B8)	
I-B8-57681	Fluid bed dryer in Room P-49 with fabric filter Torit DE-8-24 with 1140 square feet of filter area with HEPA filter (ID No. 57681)
I-B8-8143	Granulator with fabric filter with 486 square feet of filter area (ID No. 61936)
I-B8-61937	P-18 weight room with fabric filter with 486 square feet of filter area (ID No. 61937)
I-B8-61938	P-19 general manufacturing granulator/dryer with fabric filter with 486 square feet of filter area (ID No. 61938)
I-B8-61939	P-20 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61939)

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I-B8-61958	P-21 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61958)
I-B8-61940	P-30 general manufacturing, tray dryer with fabric filter with 486 square feet of filter area (ID No. 61940)
I-B8-61941	P-31 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61941)
I-B8-61942	P-32 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61942)
I-B8-61935	P-34 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61935)
I-B8-61943	P-35 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61943)
I-B8-61944	P-46 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61944)
I-B8-57680	Room air P-49 general manufacturing granulator and dryer 30 with fabric filter with 486 square feet of filter area in series with HEPA filter (ID No. 61946)
I-B8-61947	Room air with fabric filter with 486 square feet of filter area (ID No. 61947)
I-B8-61948	P-60 prep room for solutions with fabric filter with 486 square feet of filter area (ID No. 61948)
I-B8-92641	Tote Blending with fabric filter with 486 square feet of filter area (ID No. 61949)
I-B8-109434	Drum Dumper with fabric filter with 486 square feet of filter area (ID No. 61949)
I-B8-61950	P-61 weight room with fabric filter with 486 square feet of filter area (ID No. 61950)
I-B8-61951	P-51 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61951)
I-B8-61927	P-62 tray dryer with fabric filter with 486 square feet of filter area (ID No. 61952)
I-B8-61932	P-81 tray dryer with fabric filter with 486 square feet of filter area (ID No. 61953)
I-B8-61954	P-53 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61954)
I-B8-61956	P-85 weight room with fabric filter with 486 square feet of filter area (ID No. 61956)
I-B8-61957	P-86 general manufacturing with fabric filter with 486 square feet of filter area (ID No. 61957)
I-B8-PRDLCVS	central vacuum system for Pharmaceutical Research and Development Laboratory operations with fabric filter with 89 square feet of filter area (ID No. PRDLCVS)
I-B8-61945	Development Room P-35 with fabric filter (ID No. 61945)
I-B8-125582	pilot plant vacuum cleaner with fabric filter (ID No. 125582)
I-B8-125583	pilot plant vacuum cleaner with fabric filter (ID No. 125583)
Crusher Building (ID No. CB)	
I-CB-61072	hammer mill with fabric filter with 1,800 square feet of filter area (ID No. 61072)
Building Number 12, Fiber Processing & Sheet Assembly (ID No. B12)	
I-CTUV-1	FL5 UV 6kW Corona Treatment System
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 1 (ID No. DAP1)	
I-DAP1-T1101	polyethylene storage silo with fabric filter with 194 square feet of filter area (ID No. S1110)
I-DAP1-V1112	polyethylene feed hopper with fabric filter venting indoors with 29 square feet of filter area (ID No. S1112)
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 2 (ID No. DAP2)	
I-DAP2-T2101	polyethylene storage silo with fabric filter with 194 square feet of filter area (ID No. S2110)
I-DAP2-V2112	polyethylene feed hopper with fabric filter venting indoors with 29 square feet of filter area (ID No. S2112)
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 3 (ID No. DAP3)	
I-DAP3-T3101	polyethylene storage silo with fabric filter with 194 square feet of filter area (ID No. S3110)
I-DAP3-V3112	polyethylene feed hopper with fabric filter venting indoors with 29 square feet of filter area (ID No. S3112)
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 4 (ID No. DAP4)	
I-DAP4-T4101	polyethylene storage silo with fabric filter with 194 square feet of filter area (ID No. S4110)
I-DAP4-V4112	polyethylene feed hopper with fabric filter venting indoors with 29 square feet of filter area (ID No. S4112)
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 5 (ID No. DAP5)	
I-DAP5-T5101	polyethylene storage silo with fabric filter with 194 square feet of filter area (ID No. S5110)
I-DAP5-V5112	polyethylene feed hopper with fabric filter venting indoors with 29 square feet of filter area (ID No. S5112)
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 6 (ID No. DAP6)	
I-DAP6-T6101	polyethylene storage silo with a fabric filter with 194 square feet of filter area (ID No. S6110)
I-DAP6-V6112	polyethylene feed hopper with a fabric filter venting indoors with 29 square feet of filter area (ID No. S6112)

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Emission Source ID No.	Emission Source Description
DSM Dyneema LLC - Polyethylene Fiber Production Line No. 6B (ID No. DAP6B)	
I-DAP6B-T6101B	polyethylene storage silo with a fabric filter with 194 square feet of filter area (ID No. S6110B)
I-DAP6B-V6112B	polyethylene feed hopper with a fabric filter venting indoors with 29 square feet of filter area (ID No. S6112B)
DSM Dyneema LLC - Polyethylene Fiber Production Line Nos. 7A and 7B (ID No. DAP7)	
I-DAP7-T7101A and I-DAP7-T7101B	two polyethylene storage silos, each with a fabric filter with 194 square feet of filter area (ID Nos. S7110A and S7110B)
I-DAP7-V7112A and I-DAP7-V7112B	two polyethylene feed hoppers, each with a fabric filter venting indoors with 29 square feet of filter area (ID Nos. S7112A and S7112B)
DSM Dyneema LLC - Polyethylene Fiber Production Line Nos. 8A and 8B (ID No. DAP8)	
I-DAP8-T8101A and I-DAP8-T8101B	two polyethylene storage silos, each with a fabric filter with 194 square feet of filter area (ID Nos. S8110A and S8110B)
I-DAP8-V8112A and I-DAP8-V8112B	two polyethylene feed hoppers, each with a fabric filter venting indoors with 29 square feet of filter area (ID Nos. S8112A and S8112B)
Cogeneration Facility (ID No. CG)	
I-CG-1	fixed roof No. 2 fuel oil storage tank (20,000 gallon capacity)
I-CG-2	fixed roof No. 2 fuel oil storage tank (120,000 gallon capacity)
I-CG-3	fixed roof No. 2 fuel oil storage tank (120,000 gallon capacity)
Small-Scale Fiber Manufacturing Line No. 1	
I-MAP-H1	Natural gas-fired hot water heater for comfort heat (1.75 million Btu per hour heat input capacity)
I-MAP-H2	Natural gas-fired hot water heater for comfort heat (1.75 million Btu per hour heat input capacity)
Wastewater Treatment Facility	
I-WW-BSN	Wastewater neutralization tanks.
I-WW-ST	Wastewater shunt tanks (125,000 gallon capacity)

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled "Specific Permit Conditions Regulatory Guide." The link to this site is as follows: <http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>.

**ATTACHMENT 2 to cover letter of Permit No. 05754T96
Greenville Service Company, Inc.**

The following table lists all modifications associated with this permit action:

Page(s)	Section	Description of Change(s)
Cover and throughout	Throughout	Updated all tables, dates, and permit revision numbers.
Throughout	Throughout	Corrected the regulatory reference from 02D and 02Q to 02D and 02Q.
Attachment	Insignificant Activities List	Removed I-B1-83362 in Building 8 since source does not exist. Removed control device (ID No. 111014) with source since fabric filter does not exist.
Attachment	Insignificant Activities List	Added Tablet Filling Line 7 (ID No. I-B1-Line 7 filling) with Aerodyne GPC-12 cyclone 13 inches diameter (ID No. I-B1-L7) per permit renewal Addendum 1 request dated 3/9/2016.
Attachment	Insignificant Activities List	Added Continuous Manufacturing Suite (ID No. I-B1-R12855) with fabric filter with 2,280 square feet of filter area and associated HEPA filters (ID No. 132868) per permit renewal Addendum 2 requests dated 6/10 & 29/2016.
Attachment	Insignificant Activities List	Added Continuous Manufacturing Suite (ID No. I-B1-R12858) with fabric filter with 2,280 square feet of filter area and associated HEPA filters (ID No. 132868) per Addendum 2 request dated 6/10 & 29/2016.
Attachment	Insignificant Activities List	Added Continuous Manufacturing Suite (ID No. I-B1-R12858) with fluid bed dryer with Trema Cyclone 16 inches diameter (ID No. 132869) per Addendum 2 requests dated 6/10 & 29/2016.
Attachment	Insignificant Activities List	Deleted fluid bed dryer in Room P-59 (ID No. I-B8-61959) with fabric filter CD-8-25 with 2,336 square feet of filter area (ID No. 61959) per Addendum 1 request dated 3/9/2016.
Attachment	Insignificant Activities List	The fluid bed dryer in Room P-49 (ID No. I-B8-61959) control device was replaced with new a fabric filter Torit DE-8-24 with 1140 square feet of filter area with HEPA filter (ID No 57681) per Addendum 1 request dated 3/9/2016.
Attachment	Insignificant Activities List	Added description "Room air" to source (ID No. I-B8-57680) per Addendum 1 request dated 3/9/2016.
Attachment	Insignificant Activities List	Source I-B-8-61947 description was change since the removal of P-59 general manufacturing granulator and dryer 5. There is no change to the existing control device. The source description is updated as "Room air with fabric filter with 486 square feet of filter area (ID No. 61647)" per Addendum 1 request dated 3/9/2016.
Attachment	Insignificant Activities List	Added a I-CTUV-1 which is a UV 6kW Corona Treatment System that emits ozone for Fiber Line 5 in Building 12. The request and information is an Addendum dated September 2, 2016 to minor permit modification 7400021.16A received August 25, 2016.
Attachment	Insignificant Activities List	The two tanks from the waste treatment facility in Section 1 (ID Nos. WW-BSN and WW-ST) are updated as insignificant activities (ID Nos. I-WW-BSN and I-WW-ST) based on the current operations of the waste water system. The main waste water system was demolished in 2006 and only the two noted tanks remain per Addendum 2 request dated 6/10/2016.
All	Section 1	The page numbers column was added.
3	Section 1	The two tray dryers in Room M2-83 were removed (ID Nos. 16-026 and 16-027) and room is used for air room exhaust only which is now considered an insignificant activity. Emission source renamed (ID No. I-B1-M2-82). The fabric filter remains as (ID No. 111278).
4	Section 1	For Boiler 5, updated column to include MACT JJJJJ regulation.
4	Section 1	Removed Room P-4 tablet coater (ID No. 83362) with HEPA filter control device (ID No. CD83362) since source and control device do not exist.
4	Section 1	Removed Room P-3 24" tablet coater (ID No. 06143) with wet scrubber control device (ID No. 62050) since source and control device do not exist.
5	Section 1	For emission source ID No. TMR, renamed control device ID No. from CDTMR to 62044Z.

Page(s)	Section	Description of Change(s)
5	Section 1	Removed Room P-56 Lyden oven (ID No. LYDEN) with HEPA filter control device (ID No. CDLYDEN) since source and control device do not exist.
5	Section 1	For emission source ID No. 01125, renamed control device ID No. from CD01125 to 62035Z.
5	Section 1	For emission source ID No. 96588, renamed control device ID No. from 96588 to CD96588.
5	Section 1	For emission source ID No. 96586, renamed control device ID No. from 96586 to CD96586.
5 and 16	Section 1	Combined all of Building 16 sources by relocating emission sources ID Nos. CYTOTOX, 97064, EG2, and EG3 from page 16 to page 5 with the other Building 16 sources.
5	Section 1	Renamed emission source ID No. CYTOTOX to 96514. Renamed control device ID No. CDCYTOTOX to CD96514.
5	Section 1	ID No. 96514 had duplicate rooms Nos. 4F109 and 4F111 which were removed from the source description since the rooms were already listed with emission source ID No. 96587.
5	Section 1	ID No. 96514 had duplicate room No. 4F117 which was removed from the source description since the room were already listed with emission source ID No. 96588.
10	Section 1	For DAP Line No. 6, included existing missing equipment emission source I.D. No. GBL6-1 with description of "Line No. 6 General Building Exhausts for fugitive VOC emissions from miscellaneous sources".
12	Section 1	For DAP Lines Nos. 7A and 7B the identification number was changed from (ID No. DAP 7) to (ID Nos. DAP7A and DAP7B)
13	Section 1	For DAP Lines Nos. 8A and 8B the identification number was changed from (ID No. DAP 8) to (ID Nos. DAP8A and DAP8B)
14	Section 1	For DSM Dyneema LLC (ID No. DAP) – Polyethylene Fiber Production Area added "(Common Area to DAP Lines)" for clarification.
14	Section 1	Control device ID Nos. F0972 and F0972B were labeled incorrectly and changed to F0970 and F0970B.
15	Section 1	Corrected emission source descriptions for emission source ID Nos. T0905-T0906 from "DAP 6-8" to "DAP 4-6".
15	Section 1	Corrected emission source descriptions for emission source ID Nos. T0903, T0904, T0907, and T0908 from "DAP 4-5" and DAP "6-8" to "DAP 6B-8B".
15	Section 1	Corrected emission source ID No. UDYTL 4-5 to UDYTL 4-6 and emission source description from "DAP 4-5" to "DAP 4-6".
15	Section 1	Corrected emission source ID No. UDYTL 6-8 to UDYTL 6B-8B and emission source description from "DAP 6-8" to "DAP 6B-8B".
17	Section 1	Updated emission source CF-1A and CF-1B to include PSD as in Section 2. Updated CF-1B to include NSPS GG.
17	Section 1	For ID No. 10697, inserted missing generator capacity of 330kW.
19 - 61	Sections 2.1. and 2.2	Added "[15A NCAC 02D .0521(d)]" to end of each Control of Visible Emissions regulation.
18	Section 2.1.A.	Deleted redundant visible emission regulations. All listed boilers are 20% opacity.
25	Section 2.1.A.9.	Added avoidance condition for area sources subject to 40 CFR Part 63 Subpart JJJJJ for boiler emission sources ID Nos. 1-4 and Temp.
27	Section 2.1.B.5.a.	Updated language to "CF1A and CF1B" instead of "CF-1".
29-31	Section 2.1.C.(1.c, 2.c. & 3.c.)	Changed language from "assure" to "ensure".
31-35	Section 2.1.D.	For the emission source descriptions for each DAP Line; inserted the square feet of fabric filter, added "two parallel" to description "...which vents to two parallel VOC absorption...", and added the heat input rate in million Btu per hour for the regeneration thermal oxidizer and absorption cycle air heaters.

Page(s)	Section	Description of Change(s)
34	Section 2.1.D.	Added existing missing equipment description of “general building exhausts for general fugitive VOC emissions from misc. DAP 6 sources (ID No. GBL6-1).”
35	Section 2.1.D.	Updated virgin solvent tank ID Nos. to T0901, T0903, T0904, and T0905. Updated T0906 from virgin to contaminated solvent tanks. Corrected UDY tote loading operations emission source from ID No. UDYTL 6-8 to UDYTL 6B-8B.
36	Section 2.1.D.2.	Included 15A NCAC 02D .0515 particulate miscellaneous regulation for emission sources associated with bagfilters (ID Nos. S1114, 2114, 3114, 4114, 5114, 6114, 6114B, 7114A, 7114B, 8114A, and 8114B).
37	Section 2.1.D.4.a.vi.	Included 15A NCAC 02D .0521 visible emissions regulation for emission sources associated with bagfilters (ID Nos. S1114, 2114, 3114, 4114, 5114, 6114, 6114B, 7114A, 7114B, 8114A, and 8114B).
38	Section 2.1.D.6.b.	Included missing I.D. Nos. DAP1 and DAP2 to the rest of the lines.
39	Section 2.1.D.6.c.i. and ii.	Included missing DAP lines No. 1 and 2 with the associated equipment.
39	Section 2.1.D.6.c.iii.C.	Included existing exhaust EPF22.
39	Section 2.1.D.6.c.iv.C.	Included existing air handling unit EPF37.
40	Section 2.1.D.6.c.v.B.	Updated General Building Exhaust by deleting EFP35, EFP36, and EFP37 and adding EFP40, EFP41, and EFP42.
40	Section 2.1.D.6.c.v.C.	Updated air handling unit by deleting AHU14 and adding EFP45.
40	Section 2.1.D.6.d.	Updated language with new system (see below) to “Each calendar month, the Permittee shall measure and record the solvent usage (in tons/month).
40	Section 2.1.D.6.e.	Corrected emission source ID No. UDYTL 4-5 to UDYTL 4-6 and ID No. UDYTL 6-8 to UDYTL 6A-8B.
41	Section 2.1.D.6.f.vi. and vii.	For f.vi. deleted AHU12 and added EFP37. For f.vii. deleted AHU14 and added EFP45.
41	Section 2.1.D.6.f.xix..	Inserted “xix. Solvent Recovery System common to all DAP lines: ID No. C-901.” for use as part the equations for VOC emissions.
41-46	Section 2.1.D.6.(h.-r.)	Per minor permit modification application 7400021.16A dated August 25, 2016, the formula for calculating solvent usage was updated more accurately from calculating batches to measuring total solvent mass. The new formula incorporates the Coriolis mass flow rate meters for each DAP line. Therefore, the batch (B) is replaced with measured total solvent mass (M) in pounds per month. Addendum 2 for application 7400021.16A was received October 5, 2016 and incorporated an updated constant factor for the UDY containers from 0.27 to 0.29.
41-46	Section 2.1.D.6.(h.-r.)	Where applicable, inserted “Determine the emission rate from the solvent recovery system (ID No.C-901) (QC-0901) in lbs/month for each DAP line using the throughput monitored pursuant to Section 2.1 D.5.F.xix. of this permit.”
41-46	Section 2.1.D.6.(h.-r.)	Where applicable, deleted “Determine the total solvent usage at the DAP Line Nos. # through # (S#-#) in tons/month.”
41-46	Section 2.1.D.6.(h.-r.)	Where applicable in last requirement after the formula, deleted “as determined in viii above” since the language was for batches.
43	Section 2.1.D.6.(k.iii.)	Updated language to “Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 4 through 6 during the previous calendar month (M ₄ , M ₅ , and M ₆).”
43	Section 2.1.D.6.(k.vi.)	Inserted “Determine the emission rate from the dedicated tanks (ID Nos. T0905 and T0906) (Q _{T0905-T0906}) in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5. g. of this permit.”
43	Section 2.1.D.6.(k.vii.)	Corrected language to “...from DAP Line Nos. 4 through 6 (ID No. UDYTL 4-6) during the previous calendar month (UDY4-6).”
44	Section 2.1.D.6.(m.v.)	Deleted tanks T0907 and T0908 from description since not applicable to the formula.

Page(s)	Section	Description of Change(s)
44	Section 2.1.D.6.(n.iii.)	Moved from Section 2.1.D.5.m. since equations applicable for DAP 6B through DAP 8B and not DAP 6. Updated language to “Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 6B, 7A, 7B, 8A, and 8B during the previous calendar month (M_{6B} , M_{7A} , M_{7B} , M_{8A} , and M_{8B}).”
44	Section 2.1.D.6.(n.iv.)	Inserted “Determine the emission rate from the regenerative thermal oxidizer stack (ID No. F0970B) (QF0970), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xii. of this permit.”
45	Section 2.1.D.6.(n.v.)	Moved from section 2.1.D.5.m. since equations applicable for DAP 6B through DAP 8B and not DAP 6. Updated language to “Determine the emission rate from the dedicated tanks (ID Nos. T0903, T0904, T0907 and T0908) ($Q_{T090(3, 4, 7, 8)}$), in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5.g. of this permit.”
45	Section 2.1.D.6.(n.vi.)	Moved to section 2.1.D.5.m since equations applicable for DAP 6B through DAP 8B and not DAP 6. Updated language to “...DAP Line Nos. 6B, 7A, 7B, 8A, and 8B (ID No. UDYTL 6B-8B) during the previous calendar month (UDY_{6B-8B}).”
44-46	Section 2.1.D.6.(n.-r.)	Updated common sections of the equations to include the updated solvent tanks usage as ($Q_{T090(3, 4, 7, 8)}$), and updated tote loading usage as (UDY_{6B-8B}).
49	Section 2.1.F.	In the control device description, included the maximum air to cloth ratio for each bagfilter.
50	Section 2.1.F.2.c.ii.	Updated Method 9 by changing .2601 to .2610.
50	Section 2.1.F.(1.c. & 2.c.)	Changed language from “assure” to “ensure”.
52	Section 2.1.G.2.c.	Changed language from “assure” to “ensure”.
55	Section 2.2.B.	For ID Nos. EG5 and EG6, included in table applicable regulation 40 CFR Part 60, Subpart III.
58-59	Section 2.2.C.	For each of the scrubber descriptions, inserted “...rated at a minimum of ## gallons per minute liquid injection rate...”.
58	Section 2.2.C.	For emission source with four coating pans, corrected control device ID Nos. from 80501-80508 to 80505-80508.
59	Section 2.2.C.1.b.	Included appropriate regulation by adding 15A NCAC 02Q .0508(b).
59	Section 2.2.C.1.c.	Inserted addition language in quotes as, ...emission sources shall be controlled by “the fabric filters where applicable” and the wet scrubbers “at the required minimum liquid injection rate.”
59	Section 2.2.C.1.c.	Inserted addition language in quotes as, ...in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubbers are not inspected, maintained, “and operated at the minimum required injection rate.”
59-60	Section 2.2.C.(1.c. & 2.c.)	Changed language from “assure” to “ensure”.
60-62	Section 2.2.D.	Added the entire section for 10 sources with bagfilters and/or HEPA filters for Buildings Nos. 1, 8, and 16. Applicable regulations added are 15A NCAC 02D .0515 and 15A NCAC 02D .0521.
61-62	Section 2.2.D.(1.c. & 2.c.)	Changed language from “assure” to “ensure”.
64	Section 2.2.F.1.d.	Changed language from “assure” to “ensure”.

Page(s)	Section	Description of Change(s)
66-68	Section 2.2.F.3.	Updated 15A 02D .1100 TAP state only requirement language from “Attachment II to this permit Maximum Allowable TAP Emission Rates” to “the modeled source by source (unless noted differently) emission limits for formaldehyde and toluene listed in the table below”. Inserted modeled sources table with emission limits for formaldehyde and toluene based on September 27, 2013 air dispersion modeling review. Attachment II was eliminated since all other sources with TAP emission rates were well below the emission limits. Addendum 2 for application 7400021.16A was received October 5, 2016 and incorporated an updated throughput for existing source ID No. C-0901. C-0901 toluene emissions in the TAP table was doubled but overall result was negligible.
68	Section 2.2.F.4.	Included 15A NCAC 02D .1806 Control and Prohibition of Odorous Emissions as facility wide affected sources.
69-78	General Conditions	Updated to latest version of DAQ shell version 4.0 12/17/15.



State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
05754T96	05754T95	November XX, 2016	October 31, 2021

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: **Greenville Service Company, Inc.**

Facility ID: **7400021**

Facility Site Location: **5900 Martin Luther King Jr. Highway**
City, County, State, Zip: **Greenville, Pitt, NC, 27834-8928**

Mailing Address: **5900 Martin Luther King Jr. Highway**
City, State, Zip: **Greenville, NC 27834-8928**

Application Number: **7400021.15C and 7400021.16A**
Complete Application Date: **November XX, 2016**

Primary SIC Code: **2833/2834**
Division of Air Quality, **Washington Regional Office**
Regional Office Address: **943 Washington Square Mall**
Washington, NC, 27889

Permit issued this the XXth day of November, 2016

William D. Willets, P. E., Chief, Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

SECTION 1: PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) Specific Limitations and Conditions
(Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions
(Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENTS

ATTACHMENT 1.....List of Acronyms

SECTION 1 - PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Building Number 1 (ID No. B1)				
Room M2-58				
28	E128968	fluidized bed coater (a.k.a. Glatt Dryer)	E128974	scrubber consisting of a spray (quench) chamber followed by two flooded sieve trays and a demister.
Compliance Operating Scenario One for E128974 (Aqueous based binder solutions) Minimum five gallon per minute water flow to quench chamber spray nozzle and minimum 15 gallons per minute water flow to two sieve trays.				
Compliance Operating Scenario Two for E128974 (Organic based binder solutions) Minimum five gallon per minute water flow to quench chamber spray nozzle and minimum 69 gallons per minute water flow to two sieve trays. Once through scrubber water use, no recycle water use permitted.				
Solid Dose Formulation				
50	M2-77	Pharmaceutical Coating Operation Room, including six (6) 48" coating pans	130432	Regenerative thermal oxidizer
58	ES9156	Groen Kettles in Room M2-77B	9156	impingement-type wet scrubber (Minimum 30 gallons per minute liquid injection)
54, 58	47819	fluid bed dryer on Room M2-84	68194	packed tower type wet scrubber (58 gallons per minute liquid injection)
54, 58	67536, 67537, 67538, and 67539	four (4) C Room coating pans	69665, 69666, 69667, and 69668	four (4) wet impingement scrubbers (Minimum 3.0 gallons per minute water injection each)
54, 58	69680	Film Coating Room coating pan	67544	wet impingement scrubber (Minimum 3.0 gallons per minute water injection)
54, 58	69681 and 69682	two (2) D Room coating pans	67545, 67546	two (2) wet impingement scrubbers (Minimum 3.0 gallons per minute water injection each)
54, 58	69683	Room M2-81 coating pan	67547	wet impingement scrubber (Minimum 3.0 gallons per minute water injection)
54, 58	16-024	fluid bed dryer (Room M2-83)	106161 111278	packed tower scrubber (Minimum 58 gallons per minute water injection) venting to fabric filter (640 square feet of filter area)
64	69872	small dose tablet printer (Room M2-98)	NA	NA
58	80501	coating pan	80505	venturi scrubber (Minimum 53 gallons per minute water injection)
58	80502, 80503, and 80504	three (3) coating pans	80506, 80507, and 80508	three (3) venturi scrubbers (Minimum 53 gallons per minute water injection each)
53, 58	125035	tablet coating pan (60 inches in diameter)	125036	impingement scrubber (Minimum 9 gallons per minute water plate wash and minimum 6 gallons per minute water spray)

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
58	GD-1	Glatt Dryer (400 kilogram maximum batch size)	GDIS-1	impingement tray scrubber (Minimum 10 gallons per minute water flow to the trays and minimum 5 gallons per minute water flow to the nozzles; minimum 66 gallons per minute water flow to the trays when processing solvent based products)
Small Scale Production				
53	63951, 63953, and 63954	three (3) drying ovens (dispatch dryer #1, #2, and #3) with HEPAs	NA	NA
53	61075 and 61076	two (2) drying ovens (tray dryers) with HEPAs	NA	NA
64	68433	tablet printer with HEPA panel filter	NA	NA
54	MD-1	microwave dryer	CD-MD-1	condenser system
Pharmaceutical Research and Development Laboratory				
64	05562	closed chamber, pressure type ethylene oxide/Freon sterilizer	NA	NA
Pharmaceutical Process Technology Support Department				
54, 58	69697	electrically heated fluid bed drug dryer (600 pounds per hour capacity) equipped with an internal fabric filter (107.6 square feet of filter area)	106084	packed tower-type wet scrubber (Minimum 43 gallons per minute minimum liquid injection)
54, 58	69754	Accela Cota tablet coater	106083	impingement plate-type wet scrubber (Minimum 7 gallons per minute liquid injection)
54	67660	O&T Alcohol Tank	NA	NA
55	EG6 NSPS III MACT ZZZZ	Emergency diesel generator (480 horsepower)	NA	NA
Building Number 4, Power Plant (ID No. B4)				
18	1	No. 2 fuel oil/natural gas-fired boiler (38.0 million Btu per hour heat input)	NA	NA
18	2	No. 2 fuel oil/natural gas-fired boiler (38.0 million Btu per hour heat input)	NA	NA
18	3	No. 2 fuel oil/natural gas-fired boiler (38.0 million Btu per hour heat input)	NA	NA
18	4	No. 2 fuel oil/natural gas-fired boiler (70.6 million Btu per hour heat input)	NA	NA
18	B5 NSPS Dc MACT JJJJJ	No. 2 fuel oil/natural gas-fired boiler (99.0 million Btu per hour heat input)	NA	NA
18	Temp NSPS Dc	No. 2 fuel oil/natural gas-fired temporary, back-up boiler (no greater than 38.0 million Btu per hour heat input)	NA	NA
55	63165 MACT ZZZZ	emergency diesel generator (1,639 horsepower)	NA	NA
Building Number 8 - Analytical Development Laboratory and Pharmaceutical R&D Laboratory (ID No. B8)				
54, 59	41106	Room P-1 tablet coating operations and portable dryer (note: the portable dryer may be used in either Room P-1 or P-2)	62048	baffle-tower wet scrubber (Minimum 50 gallons per minute water injection rate)
54, 59	41106B	Room P-2 tablet coating operations and portable dryer (note: the portable dryer may be used in either Room P-1 or P-2)	SCR-1	baffle-tower wet scrubber (Minimum 20 gallons per minute water injection rate)

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
64	SP-1	two microwave dryers	NA	NA
54	MD-2	two microwave dryers	NA	NA
60	TMR	Room P-5 Toxic material room: tablet blending and granulation	62044Z	High Efficiency Particulate ATTENUATION HEPA filter
60	01125	Room P-9 toxic manufacture room, tablet press	62035Z	High Efficiency Particulate ATTENUATION (HEPA) filter
55	EG5 NSPS III MACT ZZZZ	Emergency diesel generator (40 horsepower)	NA	NA
Building Number 8A (ID No. B8A)				
54	QASC1	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC2	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC3	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC4	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC5	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC6	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
54	QASC7	La Calhene quality assurance peracetic acid sterilization chamber	NA	NA
Building Number 16 – Sterile Products Facility (ID No. B16)				
60	96587	Cytotoxic Room Air Cleaning System for Room Nos. 4F109 and 4F111	96587	High Efficiency Particulate ATTENUATION HEPA filter
60	96588	Compounding Room Air Cleaning System for Room Nos. 4F014, 4F015, 4F117, 4F118, 4F119, 4F126, 4F127, and 4F131	CD96588	fabric filter (3,616 square feet of filter area)
60	96586	Q/A Sampling Room Air Cleaning System for Room Nos. 1F420 and 1F419	CD96586	fabric filter (904 square feet of filter area)
60	96514	30 Cytotoxic Rooms; Nos. 2F318, 2F318A, 2F317, 2F316, 2F315, 2F319, 2F308, 2F308A, 2F313, 2F312, 2F311, 2F309, 2F310, 2F307, 2F306, 2F305, 2F304, 2F303, 4F112, 4F110, 4F108, 4F108A, 4F106, 4F103, 4F105, 4F102, and 4M002	CD96514	High Efficiency Particulate ATTENUATION HEPA filter
55	97064 MACT ZZZZ	1100 kW emergency generator	NA	NA
55	EG2 MACT ZZZZ	1100 kW emergency generator	NA	NA
55	EG3 MACT ZZZZ	1250 kW emergency generator	NA	NA
DSM Dyneema LLC - Line No. 1 (ID No. DAP1) - Polyethylene Fiber Production				
31, 62	F0951 PSD	natural gas/No. 2 fuel oil-fired process heater (6.1 million Btu per hour heat input)	NA	NA
31, 62	HWH1 PSD	natural gas/No. 2 fuel oil-fired hot water heater (8.1 million Btu per hour heat input)	NA	NA
31	V1114 NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S1114	dust collector (66 square feet of filter area)
31	V1115 NSPS HHH, PSD	suspension mixing vessel	NA	NA

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
31	V1116 NSPS HHH, PSD	suspension supply vessel	NA	NA
31	I211 NSPS HHH, PSD	extruder with localized exhaust hood capture system (EFK1961)	S0936	two parallel VOC concentrators - adsorption cycle
31	V1301, V1302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system (EFK1961)		
31	B1401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system (EFK1961)		
31	F1401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK1961) and two solvent reclaim condensers with vent to atmosphere (S1412)		
31	RSS1 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system (EFK1961)		
32	F1501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP5, final drying oven 'slip stream' exhaust (VB03 1845)	NA	NA
32	F1701 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP6, final drying oven 'slip stream' exhaust (VB03 1845)	NA	NA
32	GBL1-1 NSPS HHH, PSD	Line No. 1 General Building Exhaust (AHU3) for general fugitive VOC emissions from miscellaneous sources	NA	NA
32	GBL1-2 NSPS HHH, PSD	Line No. 1 General Building Exhausts (EFP1, EFP2, EFP3, EFP4, EFP9, and EFK0911) for general fugitive VOC emissions from miscellaneous sources	NA	NA
32	SWS1 NSPS HHH, PSD	solvent water separator	NA	NA
32	V1415 PSD	PDY waste box	NA	NA
32	X1418 PSD	Knife cutter	NA	NA
DSM Dyneema LLC - Line No. 2 (ID No. DAP2) - Polyethylene Fiber Production				
32, 62	F0952 PSD	natural gas/No. 2 fuel oil-fired process heater (5.8 million Btu per hour heat input)	NA	NA
32, 62	HWH2 PSD	natural gas/No. 2 fuel oil-fired hot water heater (6.1 million Btu per hour heat input)	NA	NA
32	V2114 NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S2114	dust collector (66 square feet of filter area)
32	V2115 NSPS HHH, PSD	suspension mixing vessel	NA	NA
32	V2116 NSPS HHH, PSD	suspension supply vessel	NA	NA
32	2211 NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK2961	S0936	two parallel VOC concentrators - adsorption cycle
32	V2301, V2302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK2961		
32	B2401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK2961		

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
32	F2401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK2961) and two solvent reclaim condensers with vent to atmosphere (S2412)	S0939 (cont.)	two parallel VOC concentrators - adsorption cycle (cont.)
32	RSS2 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK2961		
32	F2501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP14, Final drying oven 'slip stream' exhaust (S2503)	NA	NA
32	F2701 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP16, Final drying oven 'slip stream' exhaust (S2703)	NA	NA
32	F2601 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP15, Final drying oven 'slip stream' exhaust (S2603)	NA	NA
32	F2801 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP17, Final drying oven 'slip stream' exhaust (S2803)	NA	NA
32	GBL2-1 NSPS HHH, PSD	Line No. 2 General Building Exhaust (AHU7) for general fugitive VOC emissions from miscellaneous sources	S0937	VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle
32	GBL2-2 NSPS HHH, PSD	Line No. 2 General Building Exhausts (EFP10, EFP11, EFP12, EFP13, EFP18) for general fugitive VOC emissions from miscellaneous sources	NA	NA
32	SWS2 NSPS HHH, PSD	solvent water separator	NA	NA
32	V2415 PSD	PDY waste box	NA	NA
32	X2418 PSD	Knife cutter	NA	NA
DSM Dyneema LLC - Line No. 3 (ID No. DAP3) - Polyethylene Fiber Production				
32, 62	F0953 PSD	natural gas/No. 2 fuel oil-fired hot oil process heater (5.6 million Btu per hour heat input)	NA	NA
32, 62	HWH3 PSD	natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input)	NA	NA
32	V3114 NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S3114	dust collector (66 square feet of filter area)
32	V3115 NSPS HHH, PSD	suspension mixing vessel	NA	NA
32	V3116 NSPS HHH, PSD	suspension supply vessel	NA	NA
32	3211 NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK3961	S0936	two parallel VOC concentrators - adsorption cycle
32	V3301, V3302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK3961		
32	B3401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK3961		

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
32	F3401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK3961) and two solvent reclaim condensers with vent to atmosphere (S3412)	S0936 (cont.)	two parallel VOC concentrators - adsorption cycle (cont.)
32	RSS3 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK3961		
32	F3501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP25, Final drying oven 'slip stream' exhaust (S3503)	NA	NA
32	F3701 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system EFP26, Final drying oven 'slip stream' exhaust (S3703)	NA	NA
32	GBL3-1 NSPS HHH, PSD	Line No. 3 General Building Exhaust (AHU10) for general fugitive VOC emissions from miscellaneous sources	S0937	VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle
32	GBL3-2 NSPS HHH, PSD	Line No. 3 General Building Exhausts (EFP21, EFP22, EFP23, EFP24, EFP27) for general fugitive VOC emissions from miscellaneous sources	NA	NA
32	SWS3 NSPS HHH, PSD	solvent water separator	NA	NA
32	V3415 PSD	PDY waste box	NA	NA
32	X3418 PSD	Knife cutter	NA	NA
DSM Dyneema LLC - Line No. 4 (ID No. DAP4) - Polyethylene Fiber Production				
33, 62	F0954 PSD	natural gas/No. 2 fuel oil-fired hot oil process heater (5.7 million Btu per hour heat input)	NA	NA
33, 62	HWH4 PSD	natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input)	NA	NA
33	V4114 NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S4114	dust collector (66 square feet of filter area)
33	V4115 NSPS HHH, PSD	suspension mixing vessel	NA	NA
33	V4116 NSPS HHH, PSD	suspension supply vessel	NA	NA
33	4211 NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK4961	S0961	two parallel VOC concentrators - adsorption cycle
33	V4301, V4302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK4961		
33	B4401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK4961		
33	F4401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK4961) and two solvent reclaim condensers with vent to atmosphere (S4412)		

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
33	RSS4 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK4961	S0961 (cont.)	two parallel VOC concentrators - adsorption cycle (cont.)
33	F4501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-4503, Final drying oven 'slip stream' exhaust	NA	NA
33	F4601 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-4603, Final drying oven 'slip stream' exhaust	NA	NA
33	F4701 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-4703, Final drying oven 'slip stream' exhaust	NA	NA
33	GBL4-1 NSPS HHH, PSD	Line No. 4 General Building Exhaust (EFP37) for general fugitive VOC emissions from miscellaneous sources	S0961	two parallel VOC concentrators - adsorption cycle
33	GBL4-2 NSPS HHH, PSD	Line No. 4 General Building Exhausts (EFP30, EFP31, EFP32, EFP33, EFP34) for general fugitive VOC emissions from miscellaneous sources	NA	NA
33	SWS4 NSPS HHH, PSD	solvent water separator	NA	NA
33	V4415 PSD	PDY waste box	NA	NA
33	X4418 PSD	Knife cutter	NA	NA
DSM Dyneema LLC - Line No. 5 (ID No. DAP5) - Polyethylene Fiber Production				
33, 62	F0955 PSD	natural gas/No. 2 fuel oil-fired hot oil process heater (4.7 million Btu per hour heat input)	NA	NA
33, 62	HWH5 PSD	natural gas/No. 2 fuel oil-fired hot water heater (6.0 million Btu per hour heat input)	NA	NA
33	V5114A, V5114B NSPS HHH, PSD	suspension make-up tanks (Solvent introduction)	S5114	dust collector (66 square feet of filter area)
33	V5115A, V5115B NSPS HHH, PSD	two (2) suspension mixing vessels	NA	NA
33	V5116 NSPS HHH, PSD	suspension supply vessel	NA	NA
33	5211 NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK5961	S0961	two parallel VOC concentrators - adsorption cycle
33	V5301, V5302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK5961		
33	B5401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK5961		
33	F5401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK5961) and two solvent reclaim condensers with vent to atmosphere (S5412)		
33	RSS5 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK5961		

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
33	F5501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-5501, Final drying oven 'slip stream' exhaust	NA	NA
33	F5701 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-5703, Final drying oven 'slip stream' exhaust	NA	NA
33	GBL5-1 NSPS HHH, PSD	Line No. 5 General Building Exhaust (EFP45) for general fugitive VOC emissions from miscellaneous sources	S0961	two parallel VOC concentrators - adsorption cycle
33	GBL5-2 NSPS HHH, PSD	Line No. 5 General Building Exhausts (EFP38, EFP39, EFP40, EFP41, and EFP42) for general fugitive VOC emissions from miscellaneous sources	NA	NA
33	SWS5A, SWS5B NSPS HHH, PSD	two (2) solvent water separators	NA	NA
33	V5415A, V5415B PSD	two (2) PDY waste boxes	NA	NA
33	X5418A, X5418B PSD	two (2) Knife cutters	NA	NA
DSM Dyneema LLC - Line No. 6 (ID No. DAP6) - Polyethylene Fiber Production				
33, 62	F0956 PSD	natural gas/No. 2 fuel oil-fired hot oil process boiler/furnace (4.7 million Btu per hour heat input) equipped with a low NOx burner	NA	NA
33, 62	HWH6-A, HWH6-B, HWH6-C PSD	three (3) natural gas/No. 2 fuel oil-fired hot water heaters (1.75 million Btu per hour heat input each) equipped with low NOx burners	NA	NA
33	V6114 NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S6114	dust collector (66 square feet of filter area)
33	V6115 NSPS HHH, PSD	suspension mixing vessel	NA	NA
33	V6116 NSPS HHH, PSD	suspension supply vessel	NA	NA
33	6211 ^{1,8} NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK6961	S0970	VOC concentrator - adsorption cycle
33	V6301, V6302 NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK6961		
34	B6401 NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK6961		
34	F6401 NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation and two solvent reclaim condensers with a localized exhaust hood capture system (EFK6961)		
34	RSS6 NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK6961		
34	F6501 NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-6501, Final drying oven 'slip stream' exhaust	NA	NA
34	GBL6-1 NSPS HHH, PSD	Line No. 6 General Building Exhausts (EFK6961) for fugitive VOC emissions from miscellaneous sources	NA	NA

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
34	GBL6-2 NSPS HHH, PSD	Line No. 6 General Building Exhausts (EFP46, EFP47, EFP50) for fugitive VOC emissions from miscellaneous sources	NA	NA
34	SWS6 NSPS HHH, PSD	solvent water separator	NA	NA
34	V6415 PSD	PDY waste box	NA	NA
DSM Dyneema LLC - Line No. 6B (ID No. DAP6B) - Polyethylene Fiber Production				
34, 62	F0956B PSD	natural gas/No. 2 fuel oil-fired hot oil process heater (7.1 million Btu per hour heat input)	NA	NA
34, 62	HWH6B PSD	natural gas/No. 2 fuel oil-fired hot water heater (9 million Btu per hour heat input)	NA	NA
34	V6114B NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S6114B	dust collector (66 square feet of filter area)
34	V6115B NSPS HHH, PSD	suspension mixing vessel	NA	NA
34	V6116B NSPS HHH, PSD	suspension supply vessel	NA	NA
34	6211B NSPS HHH, PSD	extruder with localized exhaust hood capture system EFK_	S0970B	VOC concentrator – adsorption cycle
34	V6301B, V6302B NSPS HHH, PSD	two (2) quench baths with localized exhaust hood capture system EFK_		
34	B6401B NSPS HHH, PSD	UDY box with localized exhaust hood capture system EFK_		
34	F6401B NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK_) and two solvent reclaim condensers with vent to atmosphere (S6412B)		
34	RSS6B NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK_		
34	GBL6B-1 NSPS HHH, PSD	Line No. 6B General Building Exhaust (AHU_) for fugitive VOC emissions from miscellaneous sources		
34	F6501B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-6501, Final drying oven 'slip stream' exhaust	NA	NA
34	F6701B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-6701, Final drying oven 'slip stream' exhaust	NA	NA
34	GBL6B-2 NSPS HHH, PSD	Line No. 6B General Building Exhausts (EFP_, EFP_, EFP_, EFP_, EFP_) for fugitive VOC emissions from miscellaneous sources	NA	NA
34	SWS6B NSPS HHH, PSD	solvent water separator	NA	NA
34	V6415B PSD	PDY waste box	NA	NA
34	X6418B PSD	Knife cutter	NA	NA

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
DSM Dyneema LLC - Line Nos. 7A and 7B (ID No. DAP7A and DAP7B) - Polyethylene Fiber Production				
34, 62	F0957A, F0957B PSD	two (2) natural gas/No. 2 fuel oil-fired hot oil process heaters (7.1 million Btu per hour heat input each)	NA	NA
34, 62	HWH7A, HWH7B PSD	two (2) natural gas/No. 2 fuel oil-fired hot water heaters (9 million Btu per hour heat input each)	NA	NA
34	V7114A NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S7114A	dust collector (66 square feet of filter area)
34	V7114B NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S7114B	dust collector (66 square feet of filter area)
34	V7115A, V7115B NSPS HHH, PSD	two (2) suspension mixing vessels	NA	NA
34	V7116A, V7116B NSPS HHH, PSD	two (2) suspension supply vessels	NA	NA
34	7211A, 7211B NSPS HHH, PSD	two (2) extruders with localized exhaust hood capture system EFK7961	S0942	two parallel VOC concentrators – adsorption cycle
34	V7301A, 7302A, V7301B, V7302B NSPS HHH, PSD	four (4) quench baths with localized exhaust hood capture system EFK7961		
34	B7401A and B7401B NSPS HHH, PSD	two (2) UDY boxes with localized exhaust hood capture system EFK7961		
34	F7401A NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK7961) and two solvent reclaim condensers with vent to atmosphere (S7412A)		
34	F7401B NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK7961) and two solvent reclaim condensers with vent to atmosphere (S7412B)		
34	RSS7A NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK7961		
34	RSS7B NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK7961		
34	F7501A NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-7501, Final drying oven 'slip stream' exhaust	NA	NA
34	F7501B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-7501, Final drying oven 'slip stream' exhaust	NA	NA
34	F7701A NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-7701, Final drying oven 'slip stream' exhaust	NA	NA
34	F7701B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-7701, Final drying oven 'slip stream' exhaust	NA	NA

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
34	GBL7A-1 NSPS HHH, PSD	Line No. 7A General Building Exhaust (AHU 17A) for general fugitive VOC emissions from miscellaneous sources	S0943	two parallel VOC concentrators – adsorption cycle
34	GBL7B-1 NSPS HHH, PSD	Line No. 7B General Building Exhaust (AHU 17B) for general fugitive VOC emissions from miscellaneous sources		
34	GBL7-2 NSPS HHH, PSD	Line Nos. 7A and 7B General Building Exhausts (EFP_, EFP_, EFP_, EFP_, EFP_) for general fugitive VOC emissions from miscellaneous sources	NA	NA
34	SWS7A, SWS7B NSPS HHH, PSD	two (2) solvent water separators	NA	NA
34	V7415A, V7415B PSD	two (2) PDY waste boxes	NA	NA
35	X7418A, X7418B PSD	two (2) Knife cutters	NA	NA
DSM Dyneema LLC - Line Nos. 8A and 8B (ID No. DAP8A and DAP8B) - Polyethylene Fiber Production				
35, 62	F0958A, F0958B PSD	two (2) natural gas/No. 2 fuel oil-fired hot oil process heaters (7.1 million Btu per hour heat input each)	NA	NA
35, 62	HWH8A, HWH8B PSD	two (2) natural gas/No. 2 fuel oil-fired hot water heaters (9 million Btu per hour heat input each)	NA	NA
35	V8114A NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S8114A	dust collector (66 square feet of filter area)
35	V8114B NSPS HHH, PSD	suspension make-up tank (Solvent introduction)	S8114B	dust collector (66 square feet of filter area)
35	V8115A, V8115B NSPS HHH, PSD	two (2) suspension mixing vessels	NA	NA
35	V8116A, V8116B NSPS HHH, PSD	two (2) suspension supply vessels	NA	NA
35	8211A, 8211B NSPS HHH, PSD	two (2) extruders with localized exhaust hood capture system EFK8961	S0944	two parallel VOC concentrators – adsorption cycle
35	V8301A, V8302A, V8301B, V8302B NSPS HHH, PSD	four (4) quench baths with localized exhaust hood capture system EFK8961		
35	B8401A, B8401B NSPS HHH, PSD	two (2) UDY boxes with localized exhaust hood capture system EFK8961		
35	F8401A NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK8961) and two solvent reclaim condensers with vent to atmosphere (S8412A)		
35	F8401B NSPS HHH, PSD	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK8961) and two solvent reclaim condensers with vent to atmosphere (S8412B)		
35	RSS8A NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK8961		

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
35	RSS8B NSPS HHH, PSD	recycle solvent separator and super separator with localized exhaust hood capture system EFK8961	S0944 (cont.)	two parallel VOC concentrators – adsorption cycle (cont.)
35	F8501A NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-8501, Final drying oven ‘slip stream’ exhaust	NA	NA
35	F8501B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-8501, Final drying oven ‘slip stream’ exhaust	NA	NA
35	F8701A NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-8701, Final drying oven ‘slip stream’ exhaust	NA	NA
35	F8701B NSPS HHH, PSD	final drying oven with localized exhaust hood capture system K-8701, Final drying oven ‘slip stream’ exhaust	NA	NA
35	GBL8A-1 NSPS HHH, PSD	Line No. 8A General Building Exhaust (AHU 18A) for general fugitive VOC emissions from miscellaneous sources	S0945	two parallel VOC concentrators – adsorption cycle
35	GBL8B-1 NSPS HHH, PSD	Line No. 8B General Building Exhaust (AHU 18B) for general fugitive VOC emissions from miscellaneous sources		
35	GBL8-2 NSPS HHH, PSD	Line Nos. 8A and 8B General Building Exhausts (EFP_, EFP_, EFP_, EFP_, EFP_) for general fugitive VOC emissions from miscellaneous sources	NA	NA
35	SWS8A, SWS8B NSPS HHH, PSD	two (2) solvent water separators	NA	NA
35	V8415A, V8415B PSD	two (2) PDY waste boxes	NA	NA
35	X8418A, X8418B PSD	two (2) Knife cutters	NA	NA
DSM Dyneema LLC (ID No. DAP) - Polyethylene Fiber Production Area (Common Area to DAP Lines)				
31, 62	S0936 NSPS HHH, PSD	two parallel VOC concentrators - adsorption cycle (DAP 1-3)	F0935	natural gas fired regenerative thermal oxidizer; 4.5 million Btu heat input
32, 62	S0937 NSPS HHH, PSD	VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (DAP 2-3)		
33, 62	S0961 NSPS HHH, PSD	two parallel VOC concentrators - adsorption cycle (DAP 4-5)	F0962	natural gas fired regenerative thermal oxidizer; 4.5 million Btu heat input
33, 62	S0970 NSPS HHH, PSD	VOC concentrator - adsorption cycle (DAP 6)	F0970	natural gas fired regenerative thermal oxidizer; 2.1 million Btu heat input
34, 62	S0970B NSPS HHH, PSD	VOC concentrator - adsorption cycle (DAP 6B)	F0970B	natural gas fired regenerative thermal oxidizer; 2.4 million Btu heat input
34, 62	S0942 NSPS HHH, PSD	two parallel VOC concentrators - adsorption cycle (DAP 7 A&B)	F0938	natural gas fired regenerative thermal oxidizer; 5.5 million Btu heat input
34, 62	S0943 NSPS HHH, PSD	two parallel VOC concentrators for AHUs - adsorption cycle (DAP 7 A&B)		
35, 62	S0944 NSPS HHH, PSD	two parallel VOC concentrators - adsorption cycle (DAP 8 A&B)	F0939	natural gas fired regenerative thermal oxidizer; 5.5 million Btu heat input
35, 62	S0945 NSPS HHH, PSD	two parallel VOC concentrators for AHUs - adsorption cycle (DAP 8 A&B)		
35	T0901 NSPS HHH, PSD	solvent tank; 52,834 gallons (DAP 1-3)	NA	NA

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
35	T0902 NSPS HHH, PSD	solvent tank; 37,509 gallons (DAP 1-3)	NA	NA
35	T0903 NSPS HHH, PSD	solvent tank; 52,834 gallons (DAP 6B-8B)	NA	NA
35	T0904 NSPS HHH, PSD	solvent tank; 37,509 gallons (DAP 6B-8B)	NA	NA
35	T0905 NSPS HHH, PSD	solvent tank; 133,646 gallons (DAP 4-6)	NA	NA
35	T0906 NSPS HHH, PSD	solvent tank; 101,148 gallons (DAP 4-6)	NA	NA
35	T0907 NSPS HHH, PSD	solvent tank; 37,509 gallons (DAP 6B-8B)	NA	NA
35	T0908 NSPS HHH, PSD	solvent tank; 37,509 gallons (DAP 6B-8B)	NA	NA
35	UDYTL 1-3 NSPS HHH, PSD	Un-Drawn Yarn tote loading (DAP 1-3)	NA	NA
35	UDYTL 4-6 NSPS HHH, PSD	Un-Drawn Yarn tote loading (DAP 4-6)	NA	NA
35	UDYTL 6B-8B NSPS HHH, PSD	Un-Drawn Yarn tote loading (DAP 6B-8B)	NA	NA
35	C-0901 NSPS HHH	Solvent Recovery System (SRS) including a reboiler (H-0977), sidestream second condenser (H-0976), and top condenser (H-0978)	NA	NA
Building Number 12, Fiber Processing & Sheet Assembly (ID No. B12)				
46	FL-5 PSD	Fiber line, including exhaust fans for fiber creels, fiber impregnator, crossply machine, laminator, printer, and drum storage	V-0932	Countercurrent packed tower wet scrubber equipped with mesh-type mist eliminators (0.05% sulfuric acid scrubbant)
46	FL-1, FL-2, FL-3, FL-4, FL-6 PSD	Five (5) fiber lines (4,480 pounds per day each), including exhaust fans for fiber creels, fiber impregnator, crossply machine, laminator, printer, and drum storage	NA	NA
46	FL-7, FL-8	Two (2) fiber lines (4,480 pounds per day each), including exhaust fans for fiber creels, fiber impregnator, crossply machine, laminator, printer, and drum storage	NA	NA
46	SAU-01	One sheet assembly unit, including unwinders, assembly unit, laminating belt winders, press, and printer	NA	NA
Small-Scale Manufacturing Line				
48	MAP-1	One Small Scale Fiber Manufacturing Line, including four PE vessels (V-1101, V-1112, V-1113, and V-1114) and two solvent storage tanks (T-1 & T-2)	S-1101 S-M1112 S-P1010	Bagfilter (Maximum Air:Cloth Ratio of 2.7) Bagfilter (Maximum Air:Cloth Ratio of 2.7) (venting indoors) Bagfilter (Maximum Air:Cloth Ratio of 4.0) (venting indoors)

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Polyethylene Sheet (PES) Manufacturing Lines				
48	PES-1	PES Manufacturing Line No. 1, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-01102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-01121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-01125	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-01129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)
48	PES-2	PES Manufacturing Line No. 2, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-02102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-02121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-02129	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-02129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)
48	PES-3	PES Manufacturing Line No. 3, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-03102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-03121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-03129	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-03129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)
48	PES-4	PES Manufacturing Line No. 4, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-04102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-04121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-04129	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-04129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
48	PES-5	PES Manufacturing Line No. 5, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-05102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-05121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-05129	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-05129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)
48	PES-6	PES Manufacturing Line No. 6, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-06102	Bagfilter (Maximum Air:Cloth Ratio of 4.6)
			S-06121	Bagfilter (Maximum Air:Cloth Ratio of 4.1)
			S-06129	Bagfilter (Maximum Air:Cloth Ratio of 1.0)
			V-06129	Bagfilter (Maximum Air:Cloth Ratio of 2.9)
Cogeneration Facility				
25	CF-1A NSPS GG, PSD CF-1B NSPS Dc &GG, PSD	natural gas/No. 2 fuel oil-fired turbine (73 million Btu per hour heat input) with water injection system (optional use) and natural gas/No. 2 fuel oil-fired duct burner (64 million Btu per hour heat input)	NA	NA
55	10697 MACT ZZZZ	330 kW emergency generator	NA	NA

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

- A. Five (5) No. 2 fuel oil/natural gas-fired boilers (ID Nos. 1, 2, 3, 4, and B5) located in Building No. 4 - Power Plant**
No. 2 fuel oil/natural gas-fired temporary, back-up boiler (ID No. Temp) located in Building No. 4 - Power Plant

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	<p><u>Affected Sources: 1, 2, and 3</u> 0.32 pounds per million Btu</p> <p><u>Affected Source: 4</u> 0.28 pounds per million Btu</p> <p><u>Affected Source: Temp</u> 0.27 pounds per million Btu</p> <p><u>Affected Source: B5</u> 0.24 pounds per million Btu</p>	15A NCAC 02D .0503
Sulfur dioxide	<p><u>Affected Sources: 1, 2, 3, and 4</u> 2.3 pounds per million Btu</p> <p><u>Affected Source: Temp and B5</u> No. 2 fuel oil sulfur content shall not exceed 0.5% by weight.</p>	15A NCAC 02D .0516 15A NCAC 02D .0524 <i>40 CFR 60, Subpart Dc</i>
Visible Emissions	<p><u>Affected Sources: 1, 2, 3, 4, 5, and Temp</u> 20% opacity</p>	15A NCAC 02D .0521 15A NCAC 02D .0524 <i>40 CFR 60, Subpart Dc</i>
Sulfur dioxide	<p><u>Affected Source: 4</u> Less than 40 tons per 12-month period</p>	15A NCAC 02Q .0317 <i>(15A NCAC 02D .0530)</i>
Nitrogen oxides	<p><u>Affected Source: 4</u> Less than 40 tons per 12-month period</p> <p><u>Affected Source: B5</u> Less than 40 tons per 12-month period</p>	15A NCAC 02Q .0317 <i>(15A NCAC 02D .0530)</i>
Sulfur dioxide	<p><u>Affected Source: Temp</u> Less than 40 tons per 12-month period</p> <p><u>Affected Source: B5</u> Less than 40 tons per 12-month period</p>	15A NCAC 02Q .0317 <i>(15A NCAC 02D .0530)</i>
HAPs	<p>MACT Avoidance Limitations See Section 2.2 F.2.</p>	15A NCAC 02Q .0317 <i>(15A NCAC 02D .1111)</i>

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of No. 2 fuel oil and/or natural gas that are discharged from these sources into the atmosphere shall not exceed the following limitations:
- i. For Boilers 1-3 (**ID Nos. 1, 2, and 3**): 0.32 pounds per million Btu heat input;
 - ii. For Boiler 4 (**ID No. 4**): 0.28 pounds per million Btu
 - iii. For the temporary boiler (**ID No. Temp**): 0.27 pounds per million Btu
 - iv. For Boiler 5 (**ID No. B5**): 0.24 pounds per million Btu

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or No. 2 fuel oil in this source.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from any of the affected sources (**ID Nos. 1 through 4**) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. No monitoring, recordkeeping, or reporting is required to demonstrate compliance with the sulfur dioxide emissions limitation when firing No. 2 fuel oil or natural gas in the affected sources.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the affected sources (**ID Nos. 1, 2, 3, 4, and Temp** (when < 30 MMBtu/hr)) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. No monitoring, recordkeeping, or reporting is required to demonstrate compliance with the visible emissions limitation when firing No. 2 fuel oil or natural gas in the affected sources.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMCANCE STANDARDS (40 CFR 60, Subpart Dc)

- a. For the affected boilers (**ID Nos. B5 and Temp**) boiler, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart Dc, including Subpart A, "General Provisions".

Emission Limitations [15A NCAC 02D .0524]

- b. The maximum sulfur content of any fuel oil received and fired in the boilers (**ID Nos. B5 and Temp**) shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]
- c. For the boilers (**ID Nos. B5 and Temp**) with a maximum heat input capacity of greater than or equal to 30 million Btu per hour, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43c(c)]

Testing [15A NCAC 02Q .0508(f)]

- d. Within 60 days of installing boilers subject to the opacity limitation provided in Section 2.1 A.4.c. above, the Permittee shall conduct a Method 9 test (6-minute average of 24 observations) to determine the opacity of stack emissions. If the Permittee fails to conduct the opacity observation or if the results of the test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall retain a copy of the fuel supplier certification for any No. 2 fuel oil fired in the boilers (**ID Nos. B5 and Temp**). The fuel supplier certification shall include the following information:
- The name of the oil supplier;
 - The sulfur content of the oil (in % by weight); and,
 - A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the sulfur content of the oil exceeds the limit provided in Section 2.1 A.4.b. of this permit or if fuel supplier certifications are not retained as described above. [40 CFR 60.46c(d), 40 CFR 60.48c(f)]

- f. Each calendar month, the Permittee shall record the total quantity of each fuel fired in any NSPS-affected boilers during the previous calendar month. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0524 if it fails to create and retain the required records. [40 CFR 60.48c(g)(2)]

Notifications and Reporting [15A NCAC 02Q .0508(f)]

- g. The Permittee shall submit the following written notifications to the NCDAQ Regional Supervisor for any boiler installed at the source:
- An initial notification of the date of actual initial startup of the boiler within 15 days of such date [40 CFR 60.7(a)(1)];
 - An opacity observation notification that indicates the anticipated date that the Permittee will be conducting the Method 9 opacity observation, if so required in Section 2.1 A.4.d. of this permit, at least 30 days prior to such date [40 CFR 60.7(a)(6), 40 CFR 60.8(d)]; and,
 - Performance test results with the results of the Method 9 opacity observation, as required in Section 2.1 A.4.d. of this permit, shall be submitted within 30 days of the test.
- h. *Semiannual Report*. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to provide a semiannual summary report, acceptable to the NCDAQ Regional Air Quality Supervisor, of the sulfur content of the distillate fuel oil fired, by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The summary report shall include the following information:
- Fuel supplier certification(s) for distillate fuel oil, as provided in Section 2.1 A.4.e. of this permit;
 - A certified statement signed by the owner or operator that the records of fuel supplier certification(s) submitted represents all of the fuel fired at the affected boiler during the semiannual period; and,
 - All instances of deviations from the requirements of this permit must be clearly identified.

**5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, emissions from Boiler 4 (**ID No. 4**) shall not exceed the following limits:
- Total sulfur dioxide (SO₂) emissions shall not exceed 40 tons during any consecutive 12-month period; and,
 - Total nitrogen oxide (NO_x) emissions shall not exceed 40 tons during any consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.5.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall keep monthly records of fuel usage in a logbook (written or in electronic format), as follows:
- The total quantity (in 1,000 gal) of No. 2 fuel oil fired in Boiler 4; and,

- ii. The fuel oil supplier certification for any fuel oil fired in Boiler 4, including the sulfur content of the oil (in percent by weight).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and fuel oil sulfur content are not created and retained as required above.

- d. Each calendar month, the Permittee shall estimate SO₂ emissions from Boiler 4 for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
 - i. Calculate SO₂ emissions from the previous calendar month using the following equations:

$$E_{SO_2} = 142(S_{fo2})(Q_{fo2}) + 0.6 * Q_{ng}$$

Where,

E_{SO2} = SO₂ emissions (in lbs) during the previous calendar month;

S_{fo2} = Sulfur content in the No. 2 fuel oil (in percent by weight);

Q_{fo2} = Quantity of No. 2 fuel oil fired at Boiler 4 during the previous calendar month (in 1,000 gal);

and,

Q_{ng} = Quantity of natural gas fired at Boiler 4 during the previous calendar month (in million scf)

- ii. Sum the SO₂ emissions from Boiler 4 for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 A.5.a.i. of this permit.

- e. Each calendar month, the Permittee shall estimate NO_x emissions from Boiler 4 for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
 - i. Calculate NO_x emissions from the previous calendar month using the following equations:

$$E_{NO_x} = 20 * Q_{fo2} + 100 * Q_{ng}$$

Where,

E_{NOx} = NO_x emissions (in lbs) during the previous calendar month.

- ii. Sum the NO_x emissions from Boiler 4 for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 A.5.a.ii. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. The monthly SO₂ and NO_x emissions for the previous 17 months. The emissions must be calculated for each of the six 12-month periods over the previous 17 months;
 - ii. The monthly quantities of No. 2 fuel oil, and natural gas fired during the previous 17 months and the average sulfur content for the fuel oil; and
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

6. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, SO₂ emissions from the use of temporary boilers (**ID No. Temp**) shall not exceed 40 tons during any consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.6.a., the Permittee shall be deemed in

noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall keep monthly records of fuel usage in a logbook (written or in electronic format), as follows:
 - i. The total quantity (in 1,000 gal) of No. 2 fuel oil fired in any temporary boiler; and,
 - ii. The fuel oil supplier certification for any fuel oil fired in any temporary boiler, including the sulfur content of the oil (in percent by weight).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and fuel oil sulfur content are not created and retained as required above.

- d. Each calendar month, the Permittee shall estimate SO₂ emissions from all temporary boilers for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
 - i. Calculate SO₂ emissions from the previous calendar month using the following equations:

$$E_{SO_2} = 142(S_{fo2})(Q_{fo2}) + 0.6 * Q_{ng}$$

Where,

E_{SO₂} = SO₂ emissions (in lbs) during the previous calendar month;

S_{fo2} = Sulfur content in the No. 2 fuel oil (in percent by weight);

Q_{fo2} = Quantity of No. 2 fuel oil fired at any temporary boiler during the previous calendar month (in 1,000 gal); and,

Q_{ng} = Quantity of natural gas fired at any temporary boiler during the previous calendar month (in million scf).

- ii. Sum the SO₂ emissions from any temporary boiler for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 A.6.a. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. The monthly SO₂ emissions for the previous 17 months. The emissions must be calculated for each of the six 12-month periods over the previous 17 months;
 - ii. The monthly quantities of No. 2 fuel oil and natural gas fired during the previous 17 months and the average sulfur content for the fuel oil; and
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

**7. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, emissions from Boiler 5 (**ID No. B5**) shall not exceed the following limits:
 - i. Total sulfur dioxide (SO₂) emissions shall not exceed 40 tons during any consecutive 12-month period; and,
 - ii. Total nitrogen oxide (NO_x) emissions shall not exceed 40 tons during any consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.7.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall keep monthly records of fuel usage in a logbook (written or in electronic format), as follows:
 - i. The total quantity (in 1,000 gal) of No. 2 fuel oil fired in Boiler 4; and,
- d. The fuel oil supplier certification for any fuel oil fired in Boiler 4, including the sulfur content of the oil (in percent by weight).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and fuel oil sulfur content are not created and retained as required above.

- e. Each calendar month, the Permittee shall estimate SO₂ emissions from Boiler 5 for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:

- i. Calculate SO₂ emissions from the previous calendar month using the following equations:

$$E_{SO_2} = 142(S_{fo2})(Q_{fo2}) + 0.6 * Q_{ng}$$

Where,

E_{SO2} = SO₂ emissions (in lbs) during the previous calendar month;

S_{fo2} = Sulfur content in the No. 2 fuel oil (in percent by weight);

Q_{fo2} = Quantity of No. 2 fuel oil fired at Boiler 5 during the previous calendar month (in 1,000 gal);
and,

Q_{ng} = Quantity of natural gas fired at Boiler 5 during the previous calendar month (in million scf)

- ii. Sum the SO₂ emissions from Boiler 5 for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 A.7.a.i. of this permit.

- f. Each calendar month, the Permittee shall estimate NO_x emissions from Boiler 5 for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:

- i. Calculate NO_x emissions from the previous calendar month using the following equations:

$$E_{NO_x} = 20 * Q_{fo2} + 100 * Q_{ng}$$

Where,

E_{NOx} = NO_x emissions (in lbs) during the previous calendar month.

- ii. Sum the NO_x emissions from Boiler 5 for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if one or more of the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 A.7.a.ii. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- g. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
- The monthly SO₂ and NO_x emissions for the previous 17 months. The emissions must be calculated for each of the six 12-month periods over the previous 17 months;
 - The monthly quantities of No. 2 fuel oil, and natural gas fired during the previous 17 months and the average sulfur content for the fuel oil.

All instances of deviations from the requirements of this permit must be clearly identified.

8. **15A NCAC 02D .1111 GENERALLY AVAILABLE CONTROL TECHNOLOGY** - For the boiler (**ID No. B5**), the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111, as promulgated in 40 CFR 63, Subpart JJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers," including Subpart A "General Provisions." This permit condition contains requirements for new sources in the oil subcategory.

- a. **Compliance Dates** – The source must achieve compliance with this final rule upon startup of the source. [40 CFR 63.11196(b)(c)]

b. Compliance Requirements

- i. The Permittee shall combust only fuel oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a particulate matter (PM) emissions limit. [40 CFR 63.11210(e)]
- ii. At all times the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR 63.11205(a)]
- iii. An initial boiler tune-up is not required. [40 CFR 63.11210(f)]
- iv. A biennial tune-up is required and shall be conducted no more than 25 months after the initial startup of the affected source. [40 CFR 63.11223(b)]

The following units are only required to conduct a tune-up every five years: seasonal boilers (shutdown for 7 consecutive months or 210 consecutive days each 12-month period due to seasonal conditions) and units with oxygen trim systems, as defined in 40 CFR 63.11237. Each five-year tune-up must be conducted within 61 months after the initial startup of the affected source. The tune-up shall include the following:

- A. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within thirty days of startup. [40 CFR 63.11223(b)(7)]
- B. The Permittee shall conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. [40 CFR 63.11223(a)]
- C. As applicable, inspect the burner and clean or replace any components of the burner as necessary (the Permittee may delay the burner inspection until the next scheduled unit shutdown, but must inspect each burner at least once every 36 months). [40 CFR 63.11223(b)(1)]
- D. As applicable, inspect the flame pattern and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. [40 CFR 63.11223(b)(2)]
- E. As applicable, inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the air-to-fuel ratio inspection until the next scheduled unit shutdown, but must conduct the inspection at least once every 36 months (72 months for 5-year tune-ups). [40 CFR 63.11223(b)(3)]
- F. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject. [40 CFR 63.11223(b)(4)]
- G. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken with a portable CO analyzer. [40 CFR 63.11223(b)(5)]

- v. **If you switch to the gas-fired boiler category, the requirements of this permit condition (applicable to the oil subcategory) no longer apply.**

c. Notification and Reporting Requirements - In addition to the notification and reporting requirements of the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:

- i. An Initial Notification is required within 120 days after startup of each affected source. [40 CFR 63.9(b) and 40 CFR 63.11225(a)(2)]
- ii. A Notification of Compliance Status is required within 120 days after startup of each affected source. [40 CFR 63.9(h) and 40 CFR 63.11225(a)(4)]
- iii. Compliance Report must be prepared by March 1 of every other year (or every five years depending on the frequency of the tune-up requirements) starting March 1 the year following the first periodic tune-up, and submitted upon request. If the source experiences any deviations from the applicable requirements, then the report must be submitted by March 15. The report must meet the requirements of 40 CFR 63.11225(b)(1-4).
- iv. Within 30 days of switching fuels, the Permittee shall submit a notification. [40 CFR 63.11225(g)] The notification must identify the following:

- A. The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels and the date of the notice. [40 CFR 63.11225(g)(1)]
- B. The date upon which the fuel switch occurred. [40 CFR 63.11225(g)(2)]

d. Recordkeeping Requirements - In addition to any other recordkeeping requirements of the EPA, the Permittee shall maintain the following records as defined under 40 CFR 63.11225(c):

- i. Copies of all required notifications. [40 CFR 63.11225(c)(1)]
- ii. Record on a monthly basis the type of each fuel combusted for each boiler. [40 CFR 63.11210(e)]

- iii. Tune-up records - records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. Maintain the following records to document conformance with the work practices, emission reduction measures, and management practices:
 - A. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler. [40 CFR 63.11223(b)(6)(i)]
 - B. A description of any corrective actions taken as a part of the tune-up of the boiler. [40 CFR 63.11223(b)(6)(ii)]
 - C. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit. [40 CFR 63.11223(b)(6)(iii)]
 - iv. Seasonal boilers – For each boiler that meets the definition of seasonal boiler, the Permittee must keep records of days of operation per year. [40 CFR 63.11223(d)]
 - v. Records shall be kept of non-waste determinations per 40 CFR 63.11225(c)(2)(ii).
 - vi. Records shall be kept of the occurrence and duration of each malfunction of the boiler. These records shall include the actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a) including corrective actions to restore the malfunctioning boiler to its normal or usual manner of operation. [40 CFR 63.11225(c)(4)(iv)]
- Keep each record for 5 years following the date of each recorded action. [40 CFR 63.11225(d)]

9. AVOIDANCE CONDITION FOR AREA SOURCES SUBJECT TO 40 CFR 63 Subpart JJJJJ (6J) –

In accordance with 15A NCAC 2Q .0317, the Permittee is avoiding applicability of 40 CFR 63 Subpart JJJJJ (6J) “Industrial, Commercial, and Institutional Boilers Area Sources.” The Permittee is permitted to operate a natural gas / No. 2 fuel oil-fired boilers (**ID Nos. 1, 2, 3, 4, and Temp**). Per 40 CFR 63.11195(e), these sources are exempt from this Subpart because they are defined as gas-fired boilers in 40 CFR 63.11237. In order to maintain this exemption, the Permittee is allowed to fire liquid fuel only during periods of gas curtailment, gas supply interruptions, startups, or for periodic testing on liquid fuel (periodic testing not to exceed a combined total of 48 hours during any calendar year).

- a. The Permittee shall maintain records that document the time periods when liquid fuel is fired and the reasons the liquid fuel is fired.
- b. If the Permittee fires liquid fuel for reasons other than gas curtailment, gas supply interruptions, startups, or for periodic testing on liquid fuel, the Permittee is no longer exempt from Subpart JJJJJ (6J). As required by 40 CFR 62.11225(g), the Permittee must provide notice within 30 days of the fuel switch. The notification must identify:
 - i. The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, and the date of the notice.
 - ii. The date upon which the fuel switch occurred.

As required by 40 CFR 63.11210(h), the Permittee must demonstrate compliance within 180 days of the effective date of the fuel switch.

B. Cogeneration Unit consisting of the Cogeneration Turbine (ID No. CF-1A) and associated Duct Burner (ID No. CF-1B)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.26 pounds per million Btu	15A NCAC 02D .0503
Visible Emissions	Affected Source: CF-1A 20% opacity	15A NCAC 02D .0521
Visible Emissions	Affected Source: CF-1B 20% opacity	15A NCAC 02D .0524 40 CFR 60, Subpart Dc
Sulfur dioxide	Affected Source: CF-1B 0.5 pounds per million Btu	15A NCAC 02D .0524 40 CFR 60, Subpart Dc
Nitrogen oxides	150 parts per million volume	15A NCAC 02D .0524 40 CFR 60, Subpart GG
Fuel sulfur content	0.8 percent by weight	15A NCAC 02D .0524 40 CFR 60, Subpart GG
Nitrogen oxides	39.9 tons per consecutive twelve month period PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	39.9 tons per consecutive twelve month period PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Sulfur dioxide	No more than 1.12 million gallons of 0.5 weight percent No. 2 fuel oil per consecutive twelve month period PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas/No. 2 fuel oil that are discharged from the duct burners into the atmosphere shall not exceed 0.26 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for the firing of natural gas/No. 2 fuel oil in this source for purposes of compliance with 15A NCAC 02D .0503.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the combustion turbine (**ID No. CF-1A**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/No. 2 fuel oil in this source for purposes of compliance with 15A NCAC 02D .0521.

3. 15A NCAC 02D .0524: NSPS 40 CFR 60, SUBPART Dc

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS), as promulgated in 40 CFR 60, Subpart Dc, including Subpart A, "General Provisions."

Emission Limitations [15A NCAC 02D .0524]

- b. The maximum sulfur content of any fuel oil received and burned in the duct burner (**ID No. CF-1B**) shall not exceed 0.5 percent by weight.
- c. Visible emissions from duct burner (**ID No. CF-1B**) shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.

Monitoring [15A NCAC 02Q .0508(f)]

- d. Fuel supplier certifications shall be used to demonstrate compliance with the fuel sulfur content limitation as described under 40 CFR § 60.46c(e). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the fuel oil certifications are not maintained, or if the fuel oil content exceeds the limit in Section 2.1.B.3.b. above.

Recordkeeping [15A NCAC 02Q .0508(f)]

- e. In addition to any other recordkeeping required by 40 CFR § 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month. The

Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. Submit a summary report, acceptable to the DAQ Regional Supervisor by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the fuel supplier certification shall include:
 - i. The name of the oil supplier;
 - ii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c;
 - iii. A certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semiannual period; and
 - iv. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0524: NSPS 40 CFR 60, SUBPART GG

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS), as promulgated in 40 CFR 60, Subpart GG, including Subpart A, "General Provisions."

Emission Limitations [15A NCAC 02D .0524]

- b. The maximum sulfur content of any fuel oil received and burned in the Combustion Turbine shall not exceed 0.8 percent by weight.
- c. Nitrogen oxide emissions from this source shall not exceed 150 parts per million by volume.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. Fuel supplier certification shall be used to demonstrate compliance with the fuel sulfur content limitation as described under 40 CFR §60.333(b). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the fuel oil certifications are not maintained, or if the fuel oil content exceeds the limit in Section 2.1.B.4.b. above.
- e. Install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ± 5.0 percent and shall be approved by the Administrator.

Reporting [15A NCAC 02Q .0508(f)]

- f. Submit a summary report, acceptable to the DAQ Regional Supervisor by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the fuel supplier certification shall include:
 - i. The name of the oil supplier;
 - ii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR §60.41c;
 - iii. A certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semiannual period; and
 - iv. All instances of deviations from the requirements of this permit must be clearly identified.

**5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of this regulation, the Cogeneration Unit (**ID No. CF-1A and CF-1B**) shall discharge into the atmosphere less than 39.9 tons of nitrogen oxides and less than 39.9 tons of sulfur dioxide, per consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.5.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall keep monthly records of the amount of fuel used and the sulfur content, including certification of the fuel, in a logbook (written or in electronic format). The Permittee shall be deemed in noncompliance with

15A NCAC 02D .0530 if the sulfur content of the fuel is not monitored.

The use of fuel in this source (**ID No. CF-1A and CF-1B**) shall be limited such that neither nitrogen oxides nor sulfur dioxide emissions shall exceed 40 tons for any consecutive 12-month period. Calculations shall be made monthly and recorded in a logbook (written or in electronic format), according to the following formula:

$$E_{SO_2} = 142(S_{fo2})(Q_{fo2}) + 0.6 * Q_{ng}$$

Where,

E_{SO_2} = SO₂ emissions (in lbs) during the previous calendar month;

S_{fo2} = Sulfur content in the No. 2 fuel oil (in percent by weight);

Q_{fo2} = Quantity of No. 2 fuel oil fired at the cogeneration unit during the previous calendar month (in 1,000 gal); and,

Q_{ng} = Quantity of natural gas fired at the cogeneration unit during the previous calendar month (in million scf).

$$E_{NO_x} = 11.9 * L_{fo2} + 69.0 * L_{ng} + 20.3 * M_{fo2} + 102.5 * M_{ng} + 68.8 * N_{fo2} + 289.7 * N_{ng}$$

Where,

E_{NO_x} = NO_x emissions (in lbs) during the previous calendar month;

L_{fo2} = Quantity of No. 2 fuel oil fired at the duct burner during the previous calendar month (in 1,000 gal);

L_{ng} = Quantity of natural gas fired at the duct burner during the previous calendar month (in million scf);

M_{fo2} = Quantity of No. 2 fuel oil fired at the turbine with water injection during the previous calendar month (in 1,000 gal);

M_{ng} = Quantity of natural gas fired at the turbine with water injection during the previous calendar month (in million scf);

N_{fo2} = Quantity of No. 2 fuel oil fired at the turbine without water injection during the previous calendar month (in 1,000 gal); and,

N_{ng} = Quantity of natural gas fired at the turbine without water injection during the previous calendar month (in million scf).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not kept or if the nitrogen oxides or sulfur dioxide emissions exceed the limit in Section 2.1 B.5.a.

Reporting [15A NCAC 02Q .0508(f)]

- d. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. The monthly nitrogen oxides and sulfur dioxide emissions for the previous 17 months. The emissions must be calculated for each of the six 12-month periods over the previous 17 months;
 - ii. The monthly quantities of natural gas and No. 6 fuel oil consumed for the previous 17 months and the average sulfur content for the fuel oil; and
 - iii. The average sulfur content for the fuel oil.

C. Fluidized Bed Coater (Glatt Dryer; ID No. E128968) with scrubber (ID No. E128974)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM	for process weight rates up to 30 tons per hour $E = 4.10P^{0.67}$ where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
VOC	Work Practice Standards - See Multiple Emission Sources Section 2.2. F.1.	15A NCAC 02D .0958
VOC	No more than 40 tons per consecutive 12-month period on a rolling total basis. PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where, E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the fluidized bed coater (**Glatt Dryer; ID No. E128968**) shall be controlled by the scrubber (**ID No. E128974**). To ensure compliance, the Permittee shall:
 - i. Monitor the flow rate to the quench chamber spray nozzle to ensure that minimum of five gallons per minute at 20 psi. The flow rate shall be verified prior to each batch.
 - ii. Monitor the flow rate to the sieve trays of the scrubber to ensure a minimum water supply of 15 gallons per minute (Compliance Operating Scenario No. 1, aqueous based binder solution). The flow rate shall be verified prior to each batch.
 - iii. Perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - (A) A monthly visual inspection of the scrubber system and ductwork for leaks; and
 - (B) An annual (for each 12 month period following the initial inspection) internal inspection of the scrubbers structural integrity.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubber are not inspected and maintained or if the flow rates are not monitored.
- d. The results of flow monitoring, inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action and monitoring parameter;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the scrubber; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the scrubber within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of

each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the fluidized bed coater (**Glatt Dryer; ID No. E128968**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- Take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02Q .0508(f) is below the limit given in Section 2.1 C.2.a. above.
- If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- The date and time of each recorded action;
 - The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS

for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of this regulation, the above emission sources shall discharge into the atmosphere less than 40 tons of VOCs per consecutive 12-month period.

Operating Parameters [15A NCAC 02Q .0508(f)]

- b. The scrubber (**ID No. E128974**) shall control VOCs by at least 85% by weight. The Permittee shall operate the scrubber in accordance with the following operating parameters:
- The flow rate to the quench chamber spray nozzle shall be maintained at or above 5 gal/min at 20 psi;
 - The flow rate to the sieve trays of the scrubber shall be maintained at or above:
 - 15 gal/min (for Compliance Operating Scenario No. 1, aqueous-based binder solutions); or,
 - 69 gal/min (for Compliance Operating Scenario No. 2, organic-based binder solutions).
 - The scrubbant shall not be recycled in the scrubber during the use of organic based binder solution; and,
 - The water supplied to the scrubber shall be once through.

The Permittee may not assume any VOC emissions control for period during which it fails to comply with the

operating parameters provided above.

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test show a control efficiency of less than 85 percent, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. To ensure compliance, the Permittee shall:
- i. Monitor the flow rate to the quench chamber spray nozzle to ensure that minimum of 5 gal/min at 20 psi. The flow rate shall be verified prior to each batch and recorded.
 - ii. Monitor the flow rate to the sieve trays of the scrubber to ensure the water supply meets the minimum operating parameter pursuant to Section 2.1.C.3.b.ii. above. The flow rate shall be verified prior to each batch and recorded.
 - iii. Verify that the scrubber water is not recycled via physical verification that (A) the recycle pump is shut off or (B) the recycle line to the scrubber spray nozzle and sieve tray supply line is closed. This shall be verified prior to each batch and recorded.

The Permittee may not assume any VOC emissions control for period during which it fails to comply with the monitoring requirements provided above.

- e. Each calendar month, the Permittee shall calculate and record the VOC emissions from the Glatt Dryer for the previous calendar month.
- a. VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC-content of the material.
 - b. The Permittee may apply an 85% control efficiency to the VOC calculation for any period during which the scrubber is operated in accordance with the operating parameters provided in Section 2.1.C.3.b.ii. and the monitoring provisions in Section 2.1.C.3.d.ii. and accounting for any emissions control. The assumed scrubber efficiency shall be 85 percent.

Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of VOC containing materials or the VOC emissions are not monitored and recorded as provided above.

- f. Each calendar month, the Permittee shall calculate and record the VOC emissions from the Glatt Dryer for the previous 12-month period. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the VOC emissions exceed the limitation in Section 2.1.C.3.a. above.

Reporting [15A NCAC 02Q .0508(f)]

- g. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year half, due and postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 for the calendar year for the preceding six-month period between January and June. The report shall contain the following:
- i. The monthly VOC emissions for the previous 17 months, and
 - ii. The rolling 12-consecutive month total for each of the six months of the calendar half.

D. DSM Dyneema LLC - Polyethylene Fiber Production Line No. 1 (ID No. DAP1)

natural gas/No. 2 fuel oil-fired process heater (6.1 million Btu per hour heat input) (ID No. F0951).

natural gas/No. 2 fuel oil-fired hot water heater (8.1 million Btu per hour heat input) (ID No. HWH1)

suspension make-up vessel (ID No. V1114) with fabric filter with 66 square feet of fabric filter (ID No. S1114).

suspension mixing vessel (ID No. V1115)

suspension supply vessel (ID No. V1116)

vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:

two quench baths (ID Nos. V1301 and V1302),

UDY box (ID No. B1401),

primary drying oven (ID No. F1401), and

recycle solvent separator and super-separator (ID No. RSS1).

wet filter spinning (ID No. FBL 1)

final drying oven (ID No. F1501).
final drying oven (ID No. F1701).
general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID Nos. GBL1-1 (AHU3) and GBL1-2).
solvent water separator (ID No. SWS1)
PDY waste box (ID No. V1415).
knife cutter (ID No. X1418).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 2 (ID No. DAP2)

natural gas/No. 2 fuel oil-fired process heater (5.8 million Btu per hour heat input) (ID No. F0952)
natural gas/No. 2 fuel oil-fired hot water heater (6.1 million Btu per hour heat input) (ID No. HWH)
suspension make-up vessel (ID No. V2114) with fabric filter with 66 square feet of fabric filter (ID No. S2114)
suspension mixing vessel (ID No. V2115)
suspension supply vessel (ID No. V2116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V2301 and V2302),
UDY box (ID No. B2401),
primary drying oven (ID No. F2401), and
recycle solvent separator and super-separator (ID No. RSS2).
final drying oven (ID No. F2501).
final drying oven (ID No. F2701).
final drying oven (ID No. F2601).
final drying oven (ID No. F2801).
vapor collection system, which vents to a VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (ID No. S0937) which vents to a regenerative thermal oxidizer (ID No. F0935), for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL2-1).
¹ *During the absorption cycle this concentrator vents to the atmosphere. The concentrator vent is equipped with a CERMS to track emissions during these periods.*
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL2-2).
solvent water separator (ID No. SWS2)
PDY waste box (ID No. V2415).
knife cutter (ID No. X2418).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 3 (ID No. DAP3)

natural gas/No. 2 fuel oil-fired process heater (5.6 million Btu per hour heat input) (ID No. F0953)
natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input) (ID No. HWH3)
suspension make-up vessel (ID No. V3114) with fabric filter with 66 square feet of fabric filter (ID No. S3114)
suspension mixing vessel (ID No. V3115)
suspension supply vessel (ID No. V3116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V3301 and V3302),
UDY box (ID No. B3401),
primary drying oven (ID No. F3401), and
recycle solvent separator and super-separator (ID No. RSS3).
final drying oven (ID No. F3501).
final drying oven (ID No. F3701).
vapor collection system, which vents to a VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (ID No. S0937), which vents to a regenerative thermal oxidizer (ID No. F0935), for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL3-1).
¹ *During the absorption cycle this concentrator vents to the atmosphere. The concentrator vent is equipped with a CERMS to track emissions during these periods.*
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL3-2).
solvent water separator (ID No. SWS3)
PDY waste box (ID No. V3415).
knife cutter (ID No. X3418).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 4 (ID No. DAP4)

natural gas/No. 2 fuel oil-fired process heater (5.7 million Btu per hour heat input) (ID No. F0954)
natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input) (ID No. HWH4)
suspension make-up vessel (ID No. V4114) with fabric filter with 66 square feet of fabric filter (ID No. S4114)
suspension mixing vessel (ID No. V4115)
suspension supply vessel (ID No. V4116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer (ID No. F0962) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V4301 and V4302),
UDY box (ID No. B4401),
primary drying oven (ID No. F4401), and
recycle solvent separator and super-separator (ID No. RSS4).
final drying oven (ID No. F4501).
final drying oven (ID No. F4601).
final drying oven (ID No. F4701).
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer rated at 4.5 million Btu per hour heat input (ID No. F0962) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL4-1).
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL4-2).
solvent water separator (ID No. SWS4)
PDY waste box (ID No. V4415).
knife cutter (ID No. X4418).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 5 (ID No. DAP5)

natural gas/No. 2 fuel oil-fired process heater (4.7 million Btu per hour heat input) (ID No. F0955)
natural gas/No. 2 fuel oil-fired hot water heater (6.0 million Btu per hour heat input) (ID No. HWH5)
two suspension make-up vessels (ID Nos. V5114A and V5114B) with fabric filter with 66 square feet of fabric filter (ID No. S5114)
two suspension mixing vessels (ID Nos. V5115A and V5115B)
suspension supply vessel (ID No. V5116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer (ID No. F0962) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V5301 and V5302),
UDY box (ID No. B5401),
primary drying oven (ID No. F5401), and
recycle solvent separator and super-separator (ID No. RSS5).
final drying oven (ID No. F5501).
final drying oven (ID No. F5701).
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer rated at 4.5 million Btu per hour heat input (ID No. F0962) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL5-1).
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL5-2).
solvent water separator (ID No. SWS5)
two PDY waste boxes (ID No. V5415A and V5415B).
two knife cutters (ID Nos. X5418A and X5418B).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 6 (ID No. DAP6)

natural gas/No. 2 fuel oil-fired process boiler/furnace (4.7 million Btu per hour heat input) (ID No. F0956)
three (3) natural gas/No. 2 fuel oil-fired hot water heater (1.75 million Btu per hour heat input each) (ID No. HWH6-A, HWH6-B, and HWH6-C)
suspension make-up vessel (ID No. V6114) with fabric filter with 66 square feet of fabric filter (ID No. S6114)
suspension mixing vessel (ID No. V6115)
suspension supply vessel (ID No. V6116)
vapor collection system, which vents to VOC adsorption concentrator (ID No. S0970), which vents to a regenerative thermal oxidizer rated at 2.1 million Btu per hour heat input (ID No. F0970) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V6301A and V6302A),

UDY box (ID No. B6401),
 primary drying oven (ID Nos. F6401), and,
 recycle solvent separator and super-separator (ID Nos. RSS6).
 final drying oven (ID No. F6501)
 general building exhausts for general fugitive VOC emissions from misc. DAP 6 sources (ID No. GBL6-1).
 general building exhausts for general fugitive VOC emissions from misc. DAP 6 sources (ID No. GBL6-2).
 solvent water separators (ID Nos. SWS6)
 PDY waste box (ID No. V6415).

DSM Dyneema LLC - Polyethylene Fiber Production Line No. 6B (ID No. DAP6B)

natural gas/No. 2 fuel oil-fired process heater (7.1 million Btu per hour heat input) (ID No. F0956B)
 natural gas/No. 2 fuel oil-fired hot water heater (9 million Btu per hour heat input) (ID No. HWH6B)
 suspension make-up vessel (ID No. V6114B) with fabric filter with 66 square feet of fabric filter (ID No. S6114B)
 suspension mixing vessel (ID No. V6115B)
 suspension supply vessel (ID No. V6116B)
 vapor collection system, which vents to VOC adsorption concentrators (ID No. S0970B), which vent to a regenerative thermal oxidizer rated at 2.4 million Btu per hour heat input (ID No. F0970B) or to the oxidizer stack during the absorption cycle, on:
 two quench baths (ID Nos. V6301B and V6302B),
 UDY box (ID No. B6401B),
 primary drying oven (ID No. F6401B),
 recycle solvent separators and super-separators (ID No. RSS6B), and
 general building exhaust for fugitive VOC emissions from miscellaneous DAP 6B sources (ID No. GBL6B-1)
 two final drying ovens (ID Nos. F6501B and F6701B).
 general building exhausts for general fugitive VOC emissions from miscellaneous DAP 6B sources (ID No. GBL6B-2).
 solvent water separator (ID No. SWS6B)
 PDY waste box (ID No. V6415B).
 knife cutter (ID No. X6418B).

DSM Dyneema LLC - Polyethylene Fiber Production Line Nos. 7A and 7B (ID Nos. DAP7A and DAP7B)

two natural gas/No. 2 fuel oil-fired process heaters (7.1 million Btu per hour heat input each) (ID Nos. F0957A and F0957B)
 two natural gas/No. 2 fuel oil-fired hot water heaters (6 million Btu per hour heat input each) (ID Nos. HWH7A and HWH7B)
 suspension make-up vessel (ID No. V7114A) with fabric filter with 66 square feet of fabric filter (ID No. S7114A)
 suspension make-up vessel (ID No. V7114B) with fabric filter with 66 square feet of fabric filter (ID No. S7114B)
 two suspension mixing vessels (ID Nos. V7115A and V7115B)
 two suspension supply vessels (ID Nos. V7116A and V7116B)
 vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0942), which vent to a regenerative thermal oxidizer rated at 5.5 million Btu per hour heat (ID No. F0938) or to the oxidizer stack during the absorption cycle, on:
 two extruders (ID Nos. 7211A and 7211B),
 four quench baths (ID Nos. V7301A, V7302A, V7301B, and V7302B),
 two UDY boxes (ID No. B7401A and B7401B),
 two primary drying ovens (ID Nos. F7401A and F7401B), and
 two recycle solvent separators and super-separators (ID Nos. RSS7A and RSS7B).
 two final drying ovens (ID Nos. F7501A and F7501B).
 two final drying ovens (ID Nos. F7701A and F7701B).
 vapor collection system, which vents to two parallel VOC adsorption concentrator (ID No. S0943), which vents to a regenerative thermal oxidizer rated at 5.5 million Btu per hour heat (ID No. F0938) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous Line 7A/B sources (ID Nos. GBL7A-1 and GBL7B-1).
 general building exhausts for general fugitive VOC emissions from miscellaneous Line 7A/B sources (ID No. GBL7-2).
 two solvent water separators (ID Nos. SWS7A and SWS7B)
 two PDY waste boxes (ID No. V7415A and V7415B).

two knife cutters (ID Nos. X7418A and X7418B).

DSM Dyneema LLC - Polyethylene Fiber Production Line Nos. 8A and 8B (ID Nos. DAP8A and DAP8B)

two natural gas/No. 2 fuel oil-fired process heaters (7.1 million Btu per hour heat input each) (ID Nos. F0958A and F0958B)
 two natural gas/No. 2 fuel oil-fired hot water heaters (6 million Btu per hour heat input each) (ID Nos. HWH8A and HWH8B)
 suspension make-up vessel (ID No. V8114A) with fabric filter with 66 square feet of fabric filter (ID No. S8114A)
 suspension make-up vessel (ID No. V8114B) with fabric filter with 66 square feet of fabric filter (ID No. S8114B)
 two suspension mixing vessels (ID Nos. V8115A and V8115B)
 two suspension supply vessels (ID Nos. V8116A and V8116B)
 vapor collection system, which vent to two parallel VOC adsorption concentrators (ID No. S0944), which vent to a regenerative thermal oxidizer rated at 5.5 million Btu per hour heat (ID No. F0939) or to the oxidizer stack during the absorption cycle, on:
 two extruders (ID Nos. 8211A and 8211B),
 four quench baths (ID Nos. V8301A, V8302A, V8301B, and V8302B),
 two UDY boxes (ID No. B8401A and B8401B),
 two primary drying ovens (ID Nos. F8401A and F8401B), and
 two recycle solvent separators and super-separators (ID Nos. RSS8A and RSS8B).
 two final drying ovens (ID Nos. F8501A and F8501B).
 two final drying ovens (ID Nos. F8701A and F8701B).
 vapor collection system, which vents to two parallel VOC adsorption concentrator (ID No. S0945), which vents to a regenerative thermal oxidizer rated at 5.5 million Btu per hour heat (ID No. F0939) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous Line 8A/B sources (ID Nos. GBL8A-1 and GBL8BA-1).
 general building exhausts for general fugitive VOC emissions from miscellaneous Line 8A/B sources (ID No. GBL8-2).
 two solvent water separators (ID Nos. SWS8A and SWS8B)
 two PDY waste boxes (ID No. V8415A and V8415B).
 two knife cutters (ID Nos. X8418A and X8418B).

DSM Dyneema LLC - Polyethylene Fiber Production Area

four (4) virgin solvent tanks (ID Nos. T0901, T0903, T0904, and T0905).
 four (4) contaminated solvent tank (ID Nos. T0902, T0906, T0907, and T0908).
 Three (3) UDY tote loading operations (ID Nos. UDYTL 1-3, UDYTL 4-6, UDYTL 6B-8B).
 Solvent Recovery System (ID No. C-0901)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM	Affected Sources: Process and Hot Water Heaters Particulate emissions shall not exceed 0.31 pounds per million Btu heat input or 0.22 pounds per million Btu heat input, as specified below	15A NCAC 02D .0503
Sulfur Dioxide	Affected Sources: Process and Hot Water Heaters Sulfur dioxide emissions shall not exceed 2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
VOC	VOC emissions shall not exceed 34 pounds per ton of solvent used.	15A NCAC 02D .0524 40 CFR 63, Subpart HHH
VOC	BACT: VOC emissions shall not exceed 12 pounds per ton of solvent used.	15A NCAC 02D .0530
Nitrogen Oxides	Affected Sources: Combustion Sources See Section 2.2. E.1. PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	Affected Sources: Combustion Sources See Section 2.2. E.2. PSD AVOIDANCE CONDITION	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
VOC	Work Practice Standards - See Multiple Emission Sources Section 2.2. F.1.	15A NCAC 02D .0958
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from these sources into the atmosphere shall not exceed the following limitations:
 - i. Emissions from process heaters with **ID Nos. F0951, F0952, F0953, F0954, and F0955** shall not exceed 0.31 pounds per million Btu heat input; and,
 - ii. Emissions from process heaters with **ID Nos. F0956, F0956B, F0957A F0957B, and F0958** and hot water heaters with **ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B** shall not exceed 0.22 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.1.a.i. and ii. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources.

2. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- i. Emissions of particulate matter from the bagfilters (**ID Nos. S1114, 2114, 3114, 4114, 5114, 6114, 6114B, 7114A, 7114B, 8114A, and 8114B**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Testing [15A NCAC 02Q .0508(f)]

- a. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02Q .0508(f) and General Condition JJ. If the results of this test are above the limit given in Section 2.2 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. Particulate matter emissions from the listed emission sources shall be controlled by the fabric filters. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. An annual (for each 12 month period following the initial inspection) visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter’s structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters/HEPA filters are not inspected and maintained.

- c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the bagfilters; and
 - iv. Any variance from manufacturer’s recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- d. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.

The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or delivered on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from any source of combustion, including process heaters and hot water heaters, shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 D.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from natural gas and No. 2 fuel oil combusted in these sources.

4. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from each emission source/point venting to the atmosphere, as listed below, shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]
- ii. Process heaters (**ID Nos. F0951 through F0958**),
 - iii. Hot water heaters (**ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B**),
 - iv. Concentrators (**ID Nos. S0936, S0937, S0942 through S0945, S0961, S0970, and S0970B**),
 - v. Regenerative Thermal Oxidizers (**ID Nos. F0935, F0938, F0939, F0962, F0970, and F0970B**), and
 - vi. Uncontrolled general building exhaust points (**ID Nos. GBL1-1, GBL1-2, GBL2-2, GBL3-2, GBL4-2, GBL5-2, GBL6-2, GBL6B-2, GBL7-2, and GBL8-2**).
 - vii. Bagfilters (**ID Nos. S1114, 2114, 3114, 4114, 5114, 6114, 6114B, 7114A, 7114B, 8114A, and 8114B**).

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for the combustion of natural gas, No. 2 fuel oil, or VOC emission at the process heaters, hot water heaters, concentrators or regenerative thermal oxidizers listed in Sections 2.1 D.3.a.i. through iv. above.
- d. No monitoring/recordkeeping/reporting is required for the evaporative losses from the uncontrolled general building exhaust points listed in Section 2.1 D.3.a.v. above.

5. 15A NCAC 02D .0524, 40 CFR 60, Subpart HHH: Standard of Performance for Synthetic Fibers Production Facilities

- a. The Permittee shall not discharge into the atmosphere VOC emissions that exceed 17 kg/Mg (34 lb/ton) solvent feed from any affected fiber manufacturing line (**ID Nos. DAP1 through DAP6, DAP6B, DAP7A, DAP7B, DAP8A, and DAP8B**). Compliance with the emission limitations is determined on a 6-month rolling average basis. [40 CFR 60.602]

Notifications [15A NCAC 02Q .0508(f)]

- b. The Permittee shall comply with all applicable provisions, including the notification requirements contained in 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart HHH, including Subpart A "General Provisions." In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:
 - i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than 30 days after such date; and,
 - ii. The actual date of initial start-up of an affected facility, postmarked within 15 days after such date.

Testing/Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. The Permittee shall test, monitor, and record the VOC emissions from the fiber manufacturing lines as provided in Section 2.1 D.5.b. through v. of this permit, except as follows:
 - i. Estimate the monthly emissions from the solvent recovery system (SRS) (**ID No. C-0901**);
 - ii. Monthly emissions from the SRS shall be distributed among the DAP lines (**ID Nos. DAP1 through DAP6, DAP6B, DAP7A, DAP7B, DAP8A, and DAP8B**) by multiplying the total emissions by the ratio of the amount of solvent used in the line over the total amount of solvent used in the fiber production area. Solvent usage rates shall be estimated in accordance with Section 2.1.D.5.d. below.
 - iii. Add the SRS emissions to the monthly and 6-month average emissions calculations for each DAP line, as described Section 2.1.D.5.h. through r. below.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0524 if it fails to comply with the required testing/monitoring/recordkeeping requirements, or if the calculated 6-month average VOC emission rate calculated pursuant to subsection iii. above exceeds the limit pursuant to Section 2.1 D.4.a. of this permit.

6. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In accordance with the Best Available Control Technology (BACT) determination required pursuant to 15A NCAC 02D .0530, the 6-month average VOC emission rate from each of the fiber manufacturing lines (**ID Nos. DAP1 through DAP6, DAP6B, DAP7A, DAP7B, DAP8A, and DAP8B**), including emissions from the solvent tanks and undrawn yarn (UDY) tote loading operations, shall not exceed 12 pounds per ton of solvent feed (lbs/ton solvent) on a calendar month basis.

RTO (F-0935) for DAPs 1-3 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator (S-0936) is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC -02D .0535(f)/02Q .0505(f)(2)).

RTO (F-0962) for DAPs 4-5 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator (S-0961) is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC -02D .0535(f)/02Q .0505(f)(2)).

RTO (F-0972) for DAP 6 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator (S-0970) is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC -02D .0535(f)/02Q .0505(f)(2)).

Testing [15A NCAC 02Q .0508(f)]

- b. The Permittee shall conduct emissions stack tests on each of the previously untested fiber manufacturing lines (**ID Nos. DAP1, DAP2, DAP3, DAP4, DAP5, DAP6, DAP6B, DAP7A, DAP7B, DAP8A, and DAP8B**) to determine the emission rates from the concentrators, regenerative thermal oxidizer, uncontrolled general building exhaust vents, and air handling unit within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the affected manufacturing line.
 - i. The total hydrocarbon (THC) continuous emission rate monitoring system (CERMS) (THC analyzers and continuous flow rate monitors) associated with the regenerative thermal oxidizers, and air handling units shall be certified in accordance with 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8A (PS 8A for

THC analyzers; PS 6 for CERMS which includes the flow meters). The test for DAP3 shall also include an evaluation of the CERMS on concentrator **ID No. S0937**. In addition, the Permittee shall test these sources to determine the total hydrocarbon (THC) emissions (measured as propane and converted to solvent). EPA Methods 1-4 and 25A of 40 CFR Part 60, Appendix A shall be used as the reference test methods, or as otherwise approved in the test protocol. Comparison between the measured results from the VOC analyzer and the measured results from Method 25A will be made on the basis of the solvent being measured and not on the basis of the calibration gas.

- ii. Uncontrolled building exhaust vents shall be tested for total hydrocarbon (THC) emissions (measured as propane and converted to solvent). Testing will be performed at each vent simultaneously. The methods used to quantify the results will be EPA Methods 1-4 and 25A of 40 CFR Part 60, Appendix A, or as otherwise approved in the test protocol. In addition, the procedures of 40 CFR Part 51, Appendix M, Method 204E – “Volatile Organic Compounds Emissions in Uncaptured Stream From Building Enclosure” will be followed, where needed. In conjunction with this test, VOC analyzer and continuous flow meter data from the VOC concentrators, regenerative thermal oxidizer, and air handling unit will be collected. There shall be at least one fiber breakage event during each stack test. In the event there is not a fiber breakage, historical data may be used as a substitute or a break will be simulated at the request of the DAQ.
- iii. From the test results and emissions data obtained in ii. above, the Permittee shall determine the “multiplier”, or the ratio of total emissions from the uncontrolled exhaust points to the uncontrolled emission rate from the air handling unit. This ratio shall be calculated by summing the hourly emissions rate for all the uncontrolled exhaust points and dividing this total by the hourly emissions rate data collected for the air handling unit.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the required tests are not conducted as required above.

- c. Each of the fiber manufacturing lines and exhaust points listed below shall be tested in accordance with the procedures detailed in Section 2.1 D.5 b. of this permit:
 - i. DAP Line No. 1 (**ID No. DAP1**)
 - (A) Controlled emission rates from the concentrator when vented to the atmosphere (**ID No. S0937**),
 - (B) Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0935**),
 - (C) Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL1-2**: EFP1, EFP2, EFP3, EFP4, EFP 9 and EFK0911),
 - (D) Uncontrolled emission rate from the air handling unit (**ID No. GBL1-1**: AHU3), measured upstream from the VOC concentrator, and
 - (E) Performance test of all required continuous VOC analyzers and continuous flow meters.
 - ii. DAP Line No. 2 (**ID No. DAP2**)
 - (A) Controlled emission rates from the concentrator when vented to the atmosphere (**ID No. S0937**),
 - (B) Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0935**),
 - (C) Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL2-2**: EFP10, EFP11, EFP12, EFP13 and EFP18),
 - (D) Pre-control emission rate from the air handling unit (**ID No. GBL2-1**: AHU7), measured upstream from the VOC concentrator, and
 - (E) Performance test of all required continuous VOC analyzers and continuous flow meters.
 - iii. DAP Line No. 3 (**ID No. DAP3**)
 - A. Controlled emission rates from the concentrator when vented to the atmosphere (**ID No. S0937**),
 - B. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0935**),
 - C. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL3-2**: EFP21, EFP22, EFP23, EFP24, and EFP27),
 - D. Pre-control emission rate from the air handling unit (**ID No. GBL3-1**: AHU10), measured upstream from the VOC concentrator, and
 - E. Performance test of all required continuous VOC analyzers and continuous flow meters.
 - iv. DAP Line No. 4 (**ID No. DAP4**)
 - A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0962**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL4-2**: EFP30, EFP31, EFP32, EFP33, and EFP34),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL4-1**: AHU12, EFP37), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
 - v. DAP Line No. 5 (**ID No. DAP5**)
 - A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0962**),

- B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL5-2**, EFP38, EFP39, EFP40, EFP41, and EFP42),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL5-1**: EFP45), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- vi. DAP Line No. 6 (**ID No. DAP6**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0970**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL6-2**: EFP46, EFP47, and EFP50),
 - C. Pre-control emission rate from the in-line fan (**ID No. EFK 6961**), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- vii. DAP Line No. 6B (**ID No. DAP6B**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0970B**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL6B-2**: EFP_, EFP_, EFP_, EFP_, and EFP_),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL6B-1**: AHU_), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- viii. DAP Line No. 7A (**ID No. DAP7A**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0938**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL7-2**: EFP_, EFP_, EFP_, EFP_, and EFP_),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL7A-1**: AHU17A), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- ix. DAP Line No. 7B (**ID No. DAP7B**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0938**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL7-2**: EFP_, EFP_, EFP_, EFP_, and EFP_),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL7B-1**: AHU17B), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- x. DAP Line No. 8A (**ID No. DAP8A**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0939**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL8-2**: EFP_, EFP_, EFP_, EFP_, and EFP_),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL8A-1**: AHU18A), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.
- xi. DAP Line No. 8B (**ID No. DAP8B**)
- A. Controlled emission rate from the regenerative thermal oxidizer stack (**ID No. F0939**),
 - B. Uncontrolled emission rates from the General Building Exhaust (**ID No. GBL8-2**: EFP_, EFP_, EFP_, EFP_, and EFP_),
 - C. Pre-control emission rate from the air handling unit (**ID No. GBL8B-1**: AHU18B), measured upstream from the VOC concentrator, and
 - D. Performance test of all required continuous VOC analyzers and continuous flow meters.

Any revisions to the above listed emission sources, including uncontrolled building exhaust points, shall require a permit modification. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the required tests are not conducted as required above.

Monitoring [15A NCAC 02Q .0508(f)]

- d. Each calendar month, the Permittee shall measure and record the solvent usage (in tons/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the batch count and/or solvent usage rates are not monitored and recorded.
- e. The Permittee shall monitor and record the number of shipments made from the totes of undrawn yarn tote loading operations (**ID Nos. UDYTL 1-3, UDYTL 4-6, and UDYTL 6B-8B**) during each calendar month (in

shipments/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the number of shipments are not monitored and recorded.

- f. The Permittee shall install, calibrate, maintain, and operate monitoring devices that continuously measure and permanently record the flow rate (F) and VOC concentration (C) of the pre-concentrator exhaust stream from the air handling units and the emission streams from each affected concentrator and regenerative thermal oxidizer, as listed below:
- i. DAP1 Air Handling Unit: **ID No. GBL1-1** (AHU3)
 - ii. DAP2 Air Handling Unit: **ID No. GBL2-1** (AHU7, upstream from the concentrator)
 - iii. DAP3 Air Handling Unit: **ID No. GBL3-1** (AHU10, upstream from the concentrator)
 - iv. DAP2 / DAP3 Concentrator: **ID No. S0937**
 - v. DAP1 through DAP3 Regenerative Thermal Oxidizer: **ID No. F0935**
 - vi. DAP4 Air Handling Unit: **ID No. GBL4-1** (EFP37, upstream from the concentrator)
 - vii. DAP5 Air Handling Unit: **ID No. GBL5-1** (EFP45, upstream from the concentrator)
 - viii. DAP4 and DAP5 Regenerative Thermal Oxidizer: **ID No. F0962**
 - ix. DAP6 Air In-Line Fan: **ID No. EFK 6961** (upstream from the concentrator)
 - x. DAP6 Regenerative Thermal Oxidizer: **ID No. F0970**
 - xi. DAP6B Air Handling Unit: **ID No. GBL6B-1** (AHU_, upstream from the concentrator)
 - xii. DAP6B Regenerative Thermal Oxidizer: **ID No. F0970B**
 - xiii. DAP7A Air Handling Unit: **ID No. GBL7A-1** (AHU17A, upstream from the concentrator)
 - xiv. DAP7B Air Handling Unit: **ID No. GBL7B-1** (AHU17B, upstream from the concentrator)
 - xv. DAP7A and DAP7B Regenerative Thermal Oxidizer: **ID No. F0938**
 - xvi. DAP8A Air Handling Unit: **ID No. GBL8A-1** (AHU18A, upstream from the concentrator)
 - xvii. DAP8B Air Handling Unit: **ID No. GBL8B-1** (AHU18B, upstream from the concentrator)
 - xviii. DAP8A and DAP8B Regenerative Thermal Oxidizer: **ID No. F0939**
 - xix. Solvent Recovery System common to all DAP lines: **ID No. C-901**

The Permittee shall develop and implement a Quality Assurance/ Quality Control (QA/QC) measure for all the CERMS (THC and flow monitors). The QA/QC shall at the minimum include a provision for Calibration Drift (CD) determination and adjustments, data accuracy assessment, preventive maintenance, and program for corrective action for malfunctioning CERMS.

The continuous monitors shall conform to the requirements of 40 CFR 60.13 except that a valid hour of data for a full source operating hour shall be comprised of at least one data point in each of the four 15-minute quadrants (used to calculate the hourly average) and a valid hour of data for a partial operating hour shall be comprised of at least one valid data point in each 15-minute quadrant of the hour in which the manufacturing operates. For any operating hour in which required maintenance or quality-assurance activities are performed, a minimum of two data points separated by at least 15 minutes is required to calculate the hourly average. Continuous flow meters shall meet the requirements of 40 CFR 60.13(d) and (e) except that adjustment for zero and span drift may be made in accordance with the manufacturers recommendation and/or written procedure. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if exhaust flow rates and VOC concentrations are not monitored and recorded as provided above.

- g. The Permittee shall determine and record the monthly VOC emissions from each solvent storage tank (**ID Nos. T0901 through T0908**) (T) using actual throughput data and the U.S. EPA approved TANKS 4.0 program or other approved methodology (in lbs/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the tank VOC emissions are not monitored and recorded as provided above.

Recordkeeping [15A NCAC 02Q .0508(f)]

- h. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 1 (**ID No. DAP1**) for the previous 6-month period in accordance with the following requirements:
- i. Determine the emission rate from the air handling unit (**ID No. GBL1-1**) (Q_{GBL1-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.i. of this permit.
 - ii. Determine the emission rate from the miscellaneous building exhaust vents (**ID No. GBL1-2**) (Q_{GBL1-2}), in lbs/month, by multiplying Q_{GBL1-1} , determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - iii. Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 1, 2, and 3 during the previous calendar month (M_1 , M_2 , and M_3).
 - iv. Determine the emission rate from the regenerative thermal oxidizer stack (**ID No. F0935**) (Q_{F0935}), in

lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.v. of this permit.

- v. Determine the emission rate from the solvent recovery system (ID No.C-901) (Q_{C-0901}) in lbs/month for each DAP line using the throughput monitored pursuant to Section 2.1 D.5.F.xix. of this permit.
- vi. Determine the emission rate from the dedicated tanks (**ID Nos. T0901 and T0902**) ($Q_{T0901-T0902}$) in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5. g. of this permit.
- vii. Determine the total number of shipments from UDY tote loading operations from DAP Line Nos. 1 through 3 (**ID No. UDYTL 1-3**) during the previous calendar month (UDY_{1-3}).
- viii. Determine the solvent loss from DAP Line No. 1 (L_1) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_1 = \frac{Q_{GBL1-1} + Q_{GBL1-2} + \left(\frac{M_1}{M_1 + M_2 + M_3} \right) (Q_{F0935} + Q_{C-0901} + Q_{T0901-T0902} + 56 * 0.29 * UDY_{1-3})}{M_1}$$

- viii. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in ix. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- i. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 2 (**ID No. DAP2**) for the previous 6-month period in accordance with the following requirements:
 - i. Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL2-1**) (Q_{GBL2-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.ii. of this permit.
 - ii. Determine the emission rate from the miscellaneous building exhaust vents (**ID No. GBL2-2**) (Q_{GBL2-2}), in lbs/month, by multiplying Q_{GBL2-1} , determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - iii. Determine the emission rate from the concentrator stack (**ID No. S0937**) (Q_{S0937}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.iv. of this permit.
 - iv. Determine the solvent loss from DAP Line No. 2 (L_2) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_2 = \frac{Q_{GBL2-2} + \left(\frac{M_2}{M_2 + M_3} \right) (Q_{S0937}) + \left(\frac{M_2}{M_1 + M_2 + M_3} \right) (Q_{F0935} + Q_{C-0901} + Q_{T0901-T0902} + 56 * 0.29 * UDY_{1-3})}{M_2}$$

- v. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iv. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in v. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- j. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 3 (**ID No. DAP3**) for the previous 6-month period in accordance with the following requirements:
 - i. Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL3-1**) (Q_{GBL3-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.iii. of this permit.
 - ii. Determine the emission rate from the miscellaneous building exhaust vents (**ID No. GBL3-2**) (Q_{GBL3-2}), in lbs/month, by multiplying Q_{GBL3-1} , determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - iii. Determine the solvent loss from DAP Line No. 3 (L_3) in lbs/ton solvent from the previous calendar month

using the following equation:

$$L_3 = \frac{Q_{GBL3-2} + \left(\frac{M_3}{M_2 + M_3} \right) (Q_{S0937}) + \left(\frac{M_3}{M_1 + M_2 + M_3} \right) (Q_{F0935} + Q_{C-0901} + Q_{T0901-T0902} + 56 * 0.29 * UDY_{1-3})}{M_3}$$

iv. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iii. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in iv. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- k. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 4 (**ID No. DAP4**) for the previous 6-month period in accordance with the following requirements:
- Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL4-1**) (Q_{GBL4-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.vi. of this permit.
 - Determine the emission rate from the miscellaneous building exhaust vents (**ID No. GBL4-2**) (Q_{GBL4-2}), in lbs/month, by multiplying Q_{GBL4-1} , determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 4 through 6 during the previous calendar month (M_4 , M_5 , and M_6).
 - Determine the emission rate from the regenerative thermal oxidizer stack (**ID No. F0962**) (Q_{F0962}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.viii. of this permit.
 - Determine the emission rate from the solvent recovery system (**ID No. C-901**) (Q_{C-0901}) in lbs/month for each DAP line using the throughput monitored pursuant to Section 2.1 D.5.F.xix. of this permit.
 - Determine the emission rate from the dedicated tanks (**ID Nos. T0905 and T0906**) ($Q_{T0905-T0906}$) in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5. g. of this permit.
 - Determine the total number of shipments from UDY tote loading operations from DAP Line Nos. 4 through 6 (**ID No. UDYTL 4-6**) during the previous calendar month (UDY_{4-6}).
 - Determine the solvent loss from DAP Line No. 4 (L_4) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_4 = \frac{Q_{GBL4-2} + \left(\left(\frac{M_4}{M_4 + M_5} \right) * Q_{F0962} \right) + \left(\left(\frac{M_4}{M_4 + M_5 + M_6} \right) * (Q_{C-0901} + Q_{T0905-T0906} + 56 * 0.29 * UDY_{4-6}) \right)}{(M_4)}$$

viii. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in ix. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 5 (**ID No. DAP5**) for the previous 6-month period in accordance with the following requirements:
 - Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL5-1**) (Q_{GBL5-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.vii. of this permit.
 - Determine the emission rate from the miscellaneous building exhaust vents (**ID No. GBL5-2**) (Q_{GBL5-2}), in lbs/month, by multiplying Q_{GBL5-1} , determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.

iii. Determine the solvent loss from the previous calendar month using the following equation:

$$L_5 = \frac{Q_{GBL5-2} + \left(\left(\frac{M_5}{M_4 + M_5} \right) * Q_{F0962} \right) + \left(\left(\frac{M_5}{M_4 + M_5 + M_6} \right) * (Q_{C-0901} + Q_{T0905-T0906} + 56 * 0.29 * UDY_{4-6}) \right)}{M_5}$$

iv. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in iv. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- m. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 6 (**ID No. DAP6**) for the previous 6-month period in accordance with the following requirements:
- Determine the pre-concentrator emission rate from the in-line fan (**ID No. EFK 6961**) (Q_{GBL6-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.ix. of this permit.
 - Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL6-2**) (Q_{GBL6-2}), in lbs/month, by multiplying Q_{GBL6-1} , determined in i. above, by the general exhaust-to-in-line fan multiplier determined during the stack test.
 - Determine the emission rate from the regenerative thermal oxidizer stack (**ID No. F0970**) (Q_{F0970}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.x. of this permit.
 - Determine the emission rate from the solvent recovery system (ID No. C-901) (Q_{C-0901}) in lbs/month for each DAP line using the throughput monitored pursuant to Section 2.1 D.5.F.xix. of this permit.
 - Determine the emission rate from the dedicated tanks (**ID Nos. T0905 and T0906**) ($Q_{T0905-T0906}$), in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5.g. of this permit.
 - Determine the solvent loss from DAP Line No. 6 (L_6) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_6 = \frac{Q_{GBL6-2} + (Q_{F0970}) + \left(\left(\frac{M_6}{M_4 + M_5 + M_6} \right) * (Q_{C-0901} + Q_{T0905-T0906} + 56 * 0.29 * UDY_{4-6}) \right)}{M_6}$$

vii. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in ix. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- n. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 6B (**ID No. DAP6B**) for the previous 6-month period in accordance with the following requirements:
- Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL6B-1**) ($Q_{GBL6B-1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xi. of this permit.
 - Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL6B-2**) ($Q_{GBL6B-2}$), in lbs/month, by multiplying $Q_{GBL6B-1}$, determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 6B, 7A, 7B, 8A, and 8B during the previous calendar month (M_{6B} , M_{7A} , M_{7B} , M_{8A} , and M_{8B}).
 - Determine the emission rate from the regenerative thermal oxidizer stack (**ID No. F0970B**) (Q_{F0970B}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xii. of this permit.

- v. Determine the emission rate from the dedicated tanks (**ID Nos. T0903, T0904, T0907 and T0908**) ($Q_{T090(3,4,7,8)}$), in lbs/month, using the throughput monitored pursuant to Section 2.1 D.5.g. of this permit.
- vi. Determine the total number of shipments from UDY tote loading operations from DAP Line Nos. 6B, 7A, 7B, 8A, and 8B (**ID No. UDYTL 6B-8B**) during the previous calendar month (UDY_{6B-8B}).
- vii. Determine the solvent loss from DAP Line No. 6B (L_{6B}) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_{6B} = \frac{Q_{GBL6B-2} + (M_{6B})(Q_{F097B}) + (M_{6B})(Q_{C-0901} + Q_{T090(3,4,7,8)}) + 56 * 0.29 * UDY_{6B-8B}}{(M_{6B})}$$

- viii. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iii. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in iv. above exceeds the limit in Section 2.1 D.5.a. of this permit.
- o. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 7A (**ID No. DAP7A**) for the previous 6-month period in accordance with the following requirements:
 - i. Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL7A-1**) ($Q_{GBL7A-1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xii. of this permit.
 - ii. Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL7-2**) originating from DAP7A ($Q_{GBL7A-2}$), in lbs/month, by multiplying $Q_{GBL7A-1}$, determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - iii. Determine the emission rate from the regenerative thermal oxidizer stack (**ID No. F0938**) (Q_{F0938}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xiv. of this permit.
 - iv. Determine the solvent loss from DAP Line No. 7A (L_{7A}) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_{7A} = \frac{Q_{GBL7A-2} + (M_{7A})(Q_{F0938}) + (M_{7A})(Q_{C-0901} + Q_{T090(3,4,7,8)}) + 56 * 0.29 * UDY_{6B-8B}}{(M_{7A})}$$

- v. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iv. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in v. above exceeds the limit in Section 2.1 D.5.a. of this permit.
- p. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 7B (**ID No. DAP7B**) for the previous 6-month period in accordance with the following requirements:
 - i. Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL7B-1**) ($Q_{GBL7B-1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xiii. of this permit.
 - ii. Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL7-2**) originating from DAP7B ($Q_{GBL7B-2}$), in lbs/month, by multiplying $Q_{GBL7B-1}$, determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - iii. Determine the solvent loss from DAP Line No. 7B (L_{7B}) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_{7B} = \frac{Q_{GBL7B-2} + (M_{7B})(Q_{F0938}) + (M_{7B})(Q_{C-0901} + Q_{T09Q(3,4,7,8)}) + 56 * 0.29 * UDY_{6B-8B}}{(M_{7B})}$$

- iv. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iii. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in iv. above exceeds the limit in Section 2.1 D.5.a. of this permit.
- q. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 8A (**ID No. DAP8A**) for the previous 6-month period in accordance with the following requirements:
- Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL8A-1**) ($Q_{GBL8A-1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xv. of this permit.
 - Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL8-2**) originating from DAP8A ($Q_{GBL8A-2}$), in lbs/month, by multiplying $Q_{GBL8A-1}$, determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - Determine the emission rate from the regenerative thermal oxidizer (**ID No. F0939**) (Q_{F0939}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xvii. of this permit.
 - Determine the solvent loss from DAP Line No. 8A (L_{8A}) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_{8A} = \frac{Q_{GBL8A-2} + (M_{8A})(Q_{F0939}) + (M_{8A})(Q_{C-0901} + Q_{T09Q(3,4,7,8)}) + 56 * 0.29 * UDY_{6B-8B}}{(M_{8A})}$$

- v. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iv. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in v. above exceeds the limit in Section 2.1 D.5.a. of this permit.
- r. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 8B (**ID No. DAP8B**) for the previous 6-month period in accordance with the following requirements:
- Determine the pre-concentrator emission rate from the air handling unit (**ID No. GBL8B-1**) ($Q_{GBL8B-1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 D.5.f.xvi. of this permit.
 - Determine the emissions from the miscellaneous building exhaust vents (**ID No. GBL8-2**) originating from DAP8B ($Q_{GBL8B-2}$), in lbs/month, by multiplying $Q_{GBL8B-1}$, determined in i. above, by the general exhaust-to-AHU multiplier determined during the stack test.
 - Determine the solvent loss from DAP Line No. 8B (L_{8B}) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_{8B} = \frac{Q_{GBL8B-2} + (M_{8B})(Q_{F0939}) + (M_{8B})(Q_{C-0901} + Q_{T09Q(3,4,7,8)}) + 56 * 0.29 * UDY_{6B-8B}}{(M_{8B})}$$

- iv. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing the monthly VOC emissions, as determined in iii. above, for the previous 6 calendar months, and dividing the sum by the total number of months that the manufacturing line operated during the 6-month period. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in iv. above exceeds the limit in Section 2.1 D.5.a. of this permit.

- s. Monitoring data recorded during periods specified in i. and ii. below shall not be included in the monthly emissions calculations listed in Section 2.1 D.5.i. through s. above. Monitoring data recorded during periods specified in iii. through v. below shall be included in the monthly emissions calculations. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.
 - i. Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;
 - ii. Periods of non-operation of a DAP manufacturing line, resulting in cessation of the emissions to which the monitoring applies;
 - iii. Start-ups;
 - iv. Shutdowns; and,
 - v. Malfunctions.
- t. The Permittee must apply for and obtain a permit modification prior to revising any of the emissions calculations methodologies provided in Sections 2.1. D.5. h. through r. above. Corrections and clarifications to the emissions calculations may be revised by an administrative amendment.

Reporting [15A NCAC 02Q .0508(f)]

- u. The Permittee shall submit a semiannual summary report postmarked within 30 days after each calendar year half. The reports are to be post marked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 for the calendar year for the preceding six-month period between January and June. The report shall include the following:
 - i. The solvent loss rate (in lbs/ton solvent) of each DAP manufacturing line for each of the previous 17 calendar months;
 - ii. The 6-month average solvent loss rate (in lbs/ton solvent) of each DAP manufacturing line for each of the previous 6-month periods ending during the reporting period;
 - iii. A summary of any hour during the reporting period when insufficient monitoring data, as defined in Section 2.1 D.5.f. of this permit, was collected; and,
 - iv. Identification of any deviations from Section 2.1 D.5 of this permit.

E. Building 12, including:

- Packed Tower Wet Scrubber (ID No. V-0932) associated with Fiber Processing Line (ID No. FL-5)**
- Seven (7) Uncontrolled Fiber Processing Lines (ID Nos. FL-1, FL-2, FL-3, FL-4, FL-6, FL-7, and FL-8)**
- Sheet Assembly Unit (ID No. SAU-01)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
VOC	Combined VOC emissions from the six affected fiber processing lines (ID Nos. FL-1 through FL-6) shall not exceed 25 tons per consecutive 12-month period	15A NCAC 02D .0530
Toxic Air Pollutants	STATE ENFORCEABLE ONLY See Section 2.2. F.3.	15A NCAC 02D .1100
VOC	Work Practice Standards - See Multiple Emission Sources Section 2.2. F.1.	15A NCAC 02D .0958
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In accordance with the Best Available Control Technology (BACT) determination required pursuant to 15A NCAC 02D .0530, the combined VOC emissions from the affected fiber processing lines (**ID Nos. FL-1 through FL-6**) shall not exceed 25 tons per consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ found in Section 3. If the average of the results of this test are above the limits given in Section 2.1.E.1.a. above,

the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Each calendar month, the Permittee shall monitor and record the following production information for the previous calendar month:
 - i. Quantity of each impregnation compound utilized at the affected fiber processing lines (**ID Nos. FL-1 through FL-6**) (in gallons/month);
 - ii. VOC concentration of each impregnation compound (in lbs/gallon);
 - iii. Quantity of each ink utilized at the fiber processing lines (in gallons/month); and,
 - iv. VOC concentration of each ink (in lbs/gallon).

Records shall be maintained in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not created and retained.
- d. Each calendar month, the Permittee calculate and record the combined VOC emission rate (in tons/month) from the affected fiber processing lines (**ID Nos. FL-1 through FL-6**) for the previous calendar month in accordance with the following equation:

$$E = \frac{\sum_{i=1}^j (Q_{Pi} * C_{Pi}) + \sum_{i=1}^k (Q_{Ii} * C_{Ii})}{2,000 \text{ lbs/ton}} - E_{TEA}$$

Where,

- E = Average monthly VOC emission rate (in lbs/month);
- j = Number of impregnation compounds used during the previous calendar month;
- Q_{Pi} = Quantity of each impregnation compound (i) used during the previous calendar month (in gallons/month);
- C_{Pi} = VOC concentration of each impregnation compound (i) (in lbs/gallons);
- k = Number of inks used during the previous calendar month;
- Q_{Ii} = Quantity of each ink (i) used during the previous calendar month (in gallons/month);
- C_{Ii} = VOC concentration of each ink compound (i) (in lbs/gallons); and,
- TEA = Triethylamine (TEA) emissions (in lbs) controlled by the scrubber (**ID No. V-0932**). The quantity of TEA emissions shall be estimated in accordance with the monitoring requirements provided in Section 2.2.F.2. of this permit (“MACT Avoidance”).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monthly VOC emissions are not calculated and recorded as required above.

- e. Each calendar month, the Permittee calculate and record the combined VOC emission rate from the affected fiber processing lines (**ID Nos. FL-1 through FL-6**) for the previous 12-months of operation (in tons/12-months) by summing the monthly emission totals, as determined in Section 2.1 E.1.d. above, for the previous 12 calendar months during which the source was operating. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the 12-month rolling VOC emissions are not calculated and recorded as required above, or if the VOC emissions exceed the limit in Section 2.1 E.1.a. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a semiannual summary report postmarked within 30 days after each calendar year half. The reports are to be post marked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 for the calendar year for the preceding six-month period between January and June. The report shall include the following:
 - i. Monthly VOC emission totals, as calculated in Section 2.1 E.1.d. of this permit, for the previous 17 months;
 - ii. 12-month rolling VOC emissions, as calculated in Section 2.1 E.1.e. of this permit, for each of the six consecutive 12-month periods ending during the reporting period; and,
 - iii. Identification of any deviations from Section 2.1 E.1 of this permit.

- F. Small Scale MAP Fiber Manufacturing Line (ID No. MAP-1) associated with Bagfilters (ID Nos. S-1101 with Maximum Air:Cloth Ratio 2.7, S-M1112 with Maximum Air:Cloth Ratio 2.7, and S-P1010 with Maximum Air:Cloth Ratio 4.0)**
- Polyethylene Sheet Manufacturing Line No. 1 (ID No. PES-1) associated with Bagfilters (ID Nos. S-01102 with Maximum Air:Cloth Ratio 4.6, S-01121 with Maximum Air:Cloth Ratio 4.1, S-01125 with Maximum Air:Cloth Ratio 1.0, and V-01129 with Maximum Air:Cloth Ratio 2.9)**
- Polyethylene Sheet Manufacturing Line No. 2 (ID No. PES-2) associated with Bagfilters (ID Nos. S-02102 with Maximum Air:Cloth Ratio 4.6, S-02121 with Maximum Air:Cloth Ratio 4.1, S-02129 with Maximum Air:Cloth Ratio 1.0, and V-02129 with Maximum Air:Cloth Ratio 2.9)**
- Polyethylene Sheet Manufacturing Line No. 3 (ID No. PES-3) associated with Bagfilters (ID Nos. S-03102 with Maximum Air:Cloth Ratio 4.6, S-03121 with Maximum Air:Cloth Ratio 4.1, S-03129 with Maximum Air:Cloth Ratio 1.0, and V-03129 with Maximum Air:Cloth Ratio 2.9)**
- Polyethylene Sheet Manufacturing Line No. 4 (ID No. PES-4) associated with Bagfilters (ID Nos. S-04102 with Maximum Air:Cloth Ratio 4.6, S-04121 with Maximum Air:Cloth Ratio 4.1, S-04129 with Maximum Air:Cloth Ratio 1.0, and V-04129 with Maximum Air:Cloth Ratio 2.9)**
- Polyethylene Sheet Manufacturing Line No. 5 (ID No. PES-5) associated with Bagfilters (ID Nos. S-05102 with Maximum Air:Cloth Ratio 4.6, S-05121 with Maximum Air:Cloth Ratio 4.1, S-05129 with Maximum Air:Cloth Ratio 1.0, and V-05129 with Maximum Air:Cloth Ratio 2.9)**
- Polyethylene Sheet Manufacturing Line No. 6 (ID No. PES-6) associated with Bagfilters (ID Nos. S-06102 with Maximum Air:Cloth Ratio 4.6, S-06121 with Maximum Air:Cloth Ratio 4.1, S-06129 with Maximum Air:Cloth Ratio 1.0, and V-06129 with Maximum Air:Cloth Ratio 2.9)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM	For process weight rates up to 30 tons per hour $E = 4.10P^{0.67}$ where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants	STATE ENFORCEABLE ONLY Control of State Air Toxics – See Section 2.2. F.3.	15A NCAC 02D .1100
VOC	Work Practice Standards Section 2.2. F.1.	15A NCAC 02D .0958
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

- 1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES**
 - a. Emissions of particulate matter from these sources, excluding bagfilters that vent indoors (ID Nos. S-P1010 and S-M1112), shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the listed emission sources shall be controlled by bagfilters as detailed in the source listing. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. A monthly visual inspection of the systems ductwork and material collection units for leaks; and
 - ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilters' structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the bagfilters; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources, excluding bagfilters that vent indoors (**ID Nos. S-P1010 and S-M1112**), shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for each source within 30 days of initial startup. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 F.2.a. above.
- If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

G. Solid Dose Formulation Area – Pharmaceutical Coating Operation Room, including six (6) 48” Coating Pans (ID No. M2-77) associated with Regenerative Thermal Oxidizer (ID No. 130432)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM	for process weight rates up to 30 tons per hour $E = 4.10P^{0.67}$ where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
VOC	Limit combined VOC emissions to less than 40 tons per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
VOC	Work Practice Standards Section 2.2. F.1.	15A NCAC 02D .0958
HAPs	MACT Avoidance Limitations See Section 2.2 F.2.	15A NCAC 02Q .0317 (15A NCAC 02D .1111)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source (ID No. M2-77) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above can be derived, and shall make these records available to a NCDAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- d. No reporting is required to demonstrate compliance with this standard.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (ID No. M2-77) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any

hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.G.2.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish “normal” for each source within 30 days of initial startup. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02Q .0508(f) (Method 9) for 12 minutes is below the limit given in Section 2.1.G.2.a. above.
- If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**3. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of this regulation, emissions of VOCs from this source (**ID No. M2-77**) shall be less than 40 tons of VOCs per consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .0501(c)(8) and. If the results of this test are above the limit given in Section 2.1.G.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- c. The Permittee shall conduct a performance test of the RTO (**ID No. 130432**) prior to taking any credit for emissions reductions from the device. The Permittee shall submit all required notifications and reports for the performance testing in accordance with General Condition JJ in Section 3 of this permit. Testing shall be conducted under normal operating conditions and shall be consistent with the following test procedures:
- i. U.S. EPA Method 1 or 1A – To select sampling ports (i.e., at the inlet and outlet of the control device and prior to any releases to the atmosphere) and select the number of traverse points;
 - ii. U.S. EPA Method 2, 2A, 2C, 02D, 2F, or 2G – to determine velocity and volumetric flow rate;
 - iii. U.S. EPA Method 3, 3A, or 3B – To determine the gas molecular weight used for flow rate determination;
 - iv. U.S. EPA Method 4 – Measure moisture content of the stack gas.
 - v. U.S. EPA Method 25A – Measure the concentration of THC.

The Permittee shall use results from the performance test above to establish the actual VOC control efficiency and the minimum combustion chamber temperature required for proper operation of the control device to achieve that control efficiency.

- d. In addition to the notifications and reports required in General Condition JJ, the Permittee shall submit a report to the DAQ Regional Supervisor detailing test results no later than 60 days following the conclusion of the test. The report shall include the actual VOC control efficiency of the RTO (ID No. 130432) (in % by wt.) and the minimum combustion chamber temperature (in °F) required device to achieve that control efficiency.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall install, calibrate, maintain, and operate a temperature monitoring device equipped with a continuous recorder in the combustion chamber of the RTO (ID No. 130432). The Permittee shall monitor and record the 3-hour average temperature in the combustion chamber of the RTO (ID No. M2-77) whenever it is use. The Permittee shall not take credit for any emissions reductions from the RTO prior to conducting an initial performance test, as required in Section 2.1.G.3.c. above, or for any 3-hour period during which the average combustion chamber temperature is less than the minimum value established during the performance test.
- f. Each month the Permittee shall create and retain a record of the following production values for the previous calendar month in a logbook (written or electronic format):
 - i. Type and quantity of each batch run at the coating pans *with* creditable use of the RTO for VOC emissions control. For use of the RTO to be creditable, each of the following conditions must be met:
 - (A) The RTO must be operating;
 - (B) The required initial performance test must be complete; and,
 - (C) The 3-hour average temperature in the combustion chamber of the RTO must be at least equal to the minimum value established during the performance test.
 - ii. Type and quantity of each batch run at the coating pans *without* creditable use of the RTO for VOC emissions control.
 - iii. VOC content of each batch (in lbs/batch).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not retained.
- g. Each month the Permittee shall calculate the VOC emissions from the coating operations in Room M2-77 during the previous calendar month according to the following equation:

$$E = \frac{\sum_i^n [(N_i)(VOC_i)] + \sum_i^n \left[(M_i)(VOC_i) \left(1 - \frac{\xi_{RTO}}{100} \right) \right]}{2,000 lb/ton}$$

Where:

- E = VOC emissions (in tons/month);
- N_i = Number of batches of a given type, i, that were run without creditable use of the RTO for VOC emissions control (in batches);
- VOC_i = Total VOC content of a the batch type, i, (in lbs/batches);
- M_i = Number of batches of a given type, i, that were run with creditable use of the RTO for VOC emissions control (in batches);
- ξ_{RTO} = Control efficiency of the RTO as established in the performance test (in % by wt.); and,
- n = Number of different batch types processed in Room M2-77.

The Permittee shall maintain a logbook (written or in electronic format) that contains the monthly records of the emissions calculations as provided above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the records are not maintained.

- h. Each month the Permittee shall calculate the total VOC emissions from the coating operations in Room M2-77 for the previous consecutive 12-month period. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the records are not maintained or if the 12-month rolling VOC emissions are in exceedence of the limits given in Section 2.1.G.3.a. above.

Reporting [15A NCAC 02Q .0508(f)]

- i. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for months between January and June. The report shall contain the following information:

- i. Monthly VOC emission totals for the previous 17 months;
- ii. 12-month rolling VOC emissions for each of the six consecutive 12-month periods during the previous calendar half; and,
- iii. All instances of deviations from the requirements of this permit must be clearly identified.

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

A. VOC sources

The following table provides a summary of limits and standards for the emission source(s) described above:

Emission Source(s)	Limits/Standards	Applicable Regulation
Building No. 1 (ID No. B1), miscellaneous VOC from various production processes	5.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 7 (ID No. B7), miscellaneous VOC from various production processes	5.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 8 (ID No. B8), Analytical Development Laboratory and Pharmaceutical Research and Development Laboratory Operations	30.5 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Solid Dose Formulation, Tablet Coating Pan (ID No. 125035) and associated operations in the DMS Suite	10.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Small Scale Production, Five Drying Ovens (ID Nos. 63951, 63953, 63954, 61075, and 61076)	5.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Solid Dose Formulation Division, Fluid Bed Dryer (ID No. 47819)	10.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 8A (ID No. B8A), Sterilization Chambers	0.14 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Solid Dose Formulation, Room M2-83, Fluid Bed Dryer and Two Tray Dryers (ID Nos. 16-024, 16-026, and 16-027)	10.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 16 (ID No. I-B16), New Sterile Products Facility	5.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 8, Portable Dryers in Rooms P-1 and P-2 (ID Nos. 41106 and 41106B)	0.11 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Solid Dose Formulation Division, Room M2-78, Four Coating Pans with Scrubbers (ID Nos. 67536 through 67539)	5.2 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Solid Dose Formulation Division, Film Coating Room, Four Coating Pans with Scrubbers (ID Nos. 69680 through 69683)	5.2 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Pharmaceutical Process Technology Support Department (ID Nos. 69697, 69754, and 67660)	5.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 1, Small Scale Production Facility, Microwave Dryer (ID No. MD-1)	2.0 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 8, Analytical Development Laboratory and Pharmaceutical Research and Development Laboratory, Microwave Dryer (ID No. MD-2)	0.5 tons VOC per consecutive 12-month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530)

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS

for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of this regulation, the above emission sources shall discharge into the atmosphere less than the tabulated tons of VOCs per consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 A.1.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Calculations of VOC emissions per month shall be made at the end of each month. VOC emissions shall be determined by using an appropriate calculation method such as the number of batches processed times the "per batch" VOC emission factor. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the VOC emissions are not monitored and recorded.
- d. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the VOC emissions exceed this limit.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year half, due and postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly VOC emissions for the previous 17 months. The emissions shall be calculated for each of the six 12-month periods over the previous 17 months.

B. Diesel Generators (ID Nos. 63165, 97064, 10697, EG2, EG3, EG5, and EG6)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Emission Source(s)	Limits/Standards	Applicable Regulation
All Generators	Limit HAP Emissions pursuant to the area source standards in the Reciprocal Internal Combustion Engine (RICE) MACT in 40 CFR 63, Subpart ZZZZ.	15A NCAC 02D .1111 40 CFR 63, Subpart ZZZZ
	SO ₂ emissions shall not exceed 2.3 pounds per million Btu heat input,	15A NCAC 02D .0516
	Visible emissions shall not exceed 20 percent opacity (six-minute average).	15A NCAC 02D .0521
Building No. 4, Power Plant, Emergency Generator (ID No. 63165)	39.9 tons of nitrogen oxides and 181,986 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO _x per gallon of fuel	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 16, Sterile Products Facility, Emergency Generator (ID No. 97064) and Cogeneration Facility, Emergency Generator (ID No. 10697)	6.4 tons of nitrogen oxides and 29,191 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO _x per gallon of fuel	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Building No. 16, Emergency Generator (ID No. EG2)	10.0 tons of nitrogen oxides and 44,326 gallons of diesel fuel per consecutive 12-month period @ 0.451 pounds NO _x per gallon of fuel	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Diesel Generator (ID No. EG-3)	40.0 tons of nitrogen oxides and 181,986 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO _x per gallon of fuel	15A NCAC 02Q .0317 (15A NCAC 02D .0530)
Emergency Diesel Generators (ID No. EG5 and EG6)	Limit nitrogen oxides per NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart III	15A NCAC 02D .0524 40 CFR 60, Subpart III

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.2 B.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 15A NCAC 02Q .0508(f)(A)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from No. 2 fuel oil combustion for these sources for purposes of compliance with 15A NCAC 02D .0516.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 B.2.a.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in these sources for purposes of compliance with 15A NCAC 02D .0515.

3. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS**for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- b. In order to avoid applicability of this regulation, NO_x emissions and fuel combustion rates from the generators shall not exceed the following limits for an consecutive 12-month period:
- i. Building No. 4, Power Plant, Emergency Generator (**ID No. 63165**): 39.9 tons of nitrogen oxides and 181,986 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO_x per gallon of fuel.
 - ii. Building No. 16, Sterile Products Facility, Emergency Generator (**ID No. 97064**) and Cogeneration Facility, Emergency Generator (**ID No. 10697**): 6.4 tons of nitrogen oxides and 29,191 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO_x per gallon of fuel.
 - iii. Building No. 16, Emergency Generator (**ID No. EG2**): 10.0 tons of nitrogen oxides and 44,326 gallons of diesel fuel per consecutive 12-month period @ 0.451 pounds NO_x per gallon of fuel.
 - iv. Diesel Generator (**ID No. EG-3**): 40.0 tons of nitrogen oxides and 181,986 gallons of diesel fuel per consecutive 12-month period @ 0.438 pounds NO_x per gallon of fuel.

Testing [15A NCAC 02Q .0508(f)]

- c. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 B.3.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The Permittee shall keep monthly records of the amount of fuel used in a logbook (written or in electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur content of the fuel is not monitored.
- e. The use of fuel in these generators shall be limited in accordance with the tabulated values such that the tabulated nitrogen oxides emissions shall not be exceeded. Calculations shall be made monthly and recorded in a logbook (written or in electronic format), showing nitrogen oxide emissions from each generator.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year half, due and postmarked on or before January 30 of each calendar year for the preceding six-month

period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:

- iv. The monthly nitrogen oxides and VOCs emissions for the previous 17 months. The emissions must be calculated for each of the six 12-month periods over the previous 17 months; and
- v. The monthly quantities of natural gas consumed for the previous 17 months.

4. 15A NCAC 02D .1111: MAXIMUM AVAILABLE CONTROL TECHNOLOGY

40 CFR 63, Subpart ZZZZ: Reciprocal Internal Combustion Engine (RICE) MACT – Area Source Standards Only

- a. The Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 02D .1111, “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63, Subpart ZZZZ by May 3, 2014. Generators (ID Nos. EG5 and EG6) are only affected by the area source standards provided in the rule. An affected source must meet the requirements of this subpart by meeting the requirements of 40 CFR §60 Subpart IIII. No further requirements apply for the engines under this subpart.

For EG5 and EG6:

5. 15A NCAC 02D .0524 NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART IIII]

- a. The provisions of this subpart are applicable to manufacturer, owners, and operators of stationary compression ignition (CI), reciprocating internal combustion engines (RICE). The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards (NSPS)” as promulgated in 40 CFR Part 60 Subpart IIII, including Subpart A “General Provisions.”

Emission Standards

Emergency Engines

- b. Pursuant to 40 CFR §60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202 for all pollutants for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

Monitoring [15A NCAC 02Q .0308(a)]

- c. The Permittee shall operate the stationary ICE according to the requirements in paragraphs (f)(1) through (3) of §60.4211. In order for the engine to be considered an emergency stationary ICE under this Subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of §60.4211, is prohibited. If the Permittee does not operate the engine according to the requirements in paragraphs (f)(1) through (3) of §60.4211, the engine will not be considered an emergency engine under this Subpart and shall meet all requirements for non-emergency engines.
 - i. There is no time limit on the use of emergency stationary ICE in emergency situations.
 - ii. The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of §60.4211 for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of §60.4211 counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
 - (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (B) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
 - (C) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

- iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of §60.4211, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
 - (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
 - (AA) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
 - (BB) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
 - (CC) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
 - (DD) The power is provided only to the facility itself or to support the local transmission and distribution system.
 - (EE) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [§60.4211(f)]
- d. Pursuant to 40 CFR §60.4206, owners and operators must operate and maintain the stationary RICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

Fuel Requirements for Owners and Operators

- e. Pursuant to 40 CFR §60.4207, owners and operators must use fuel with a maximum sulfur content of 15 ppmw and a cetane index of at least 40.
- f. Pursuant to 40 CFR §60.4209(a), the owner or operator must install a non-resettable hour meter prior to start-up of the engines.

Recordkeeping [15A NCAC 02Q .0308(a)]

- g. Starting with the emergency engine model year 2011, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. [§60.4214(b)]

C. Particulate Matter Sources

Building No. 1 – Solid Dose Formulation:

- Groen Kettles in Room No. M2-77B (ID No. ES9156) with associated impingement-type wet scrubber rated at a minimum of 30 gallons per minute liquid injection (ID No. 9156);**
- Fluid Bed Dryer in Room No. M2-84 (ID No. 47819) with associated packed tower type wet scrubber rated at a minimum of 58 gallons per minute liquid injection (ID No. 68194);**
- Four (4) C Room Coating Pans (ID Nos. 67539, 67538, 67536, and 67537) with associated impingement-type wet scrubbers each rated at a minimum of 3 gallons per minute liquid injection (ID Nos. 69665, 69666, 69667, and 69668);**
- Film Coating Room Coating Pan (ID No. 69680) with associated impingement-type wet scrubber rated at a minimum of 3 gallons per minute liquid injection (ID No. 67544);**
- Two (2) D Room Coating Pans (ID Nos. 69681 and 69682) with associated impingement-type wet scrubbers each rated at a minimum of 3 gallons per minute liquid injection (ID Nos. 67545 and 67546);**
- Film M2-81 Coating Room (ID No. 69683) with associated impingement-type wet scrubber rated at a**

- minimum of 3 gallons per minute liquid injection (ID No. 67547);
- Fluid Bed Dryer in Room M2-83 (ID No. 16-024) with associated packed tower scrubber rated at a minimum of 58 gallons per minute liquid injection (ID No. 106161) and fabric filter with 640 square feet of filter area (ID No. 111278);
- Four (4) Coating Pans (ID Nos. 80501, 80502, 80503, 80504) with associated venturi scrubbers each rated at a minimum of 53 gallons per minute liquid injection (ID No. 80505-80508);
- Tablet coating pan (ID No. 125035) with associated impingement-type wet scrubber rated at a minimum of 9 gallons per minute water plate wash and a minimum of 6 gallons per minute water spray (ID No. 120536);
- Glatt Dryer (ID No. GD-1) with associated impingement tray wet scrubber rated at a minimum of 10 gallons per minute water flow to the trays and minimum of 5 gallons per minute water flow to the nozzles; minimum of 66 gallons per minute water flow to the trays when processing solvent based products (ID No. GDIS-1).

Building No. 1 – Pharmaceutical Process Technology Support Department:

- Electrically-heated fluid bed drug dryer (ID No. 69697) with an internal fabric filter (107 square feet of filter area) with associated packed tower scrubber rated at a minimum of 43 gallons per minute liquid injection (ID No. 106084);
- Accela Cota tablet coater (ID No. 69754) with associated impingement-type wet scrubber rated at a minimum of 7 gallons per minute liquid injection (ID No. 106083).

Building No. 8:

- Room P-1 tablet coating operations and portable dryer (ID No. 41106) with associated baffle-tower wet scrubber rated at a minimum of 50 gallons per minute liquid injection (ID No. 62048);
- Room P-2 tablet coating operations and portable dryer (ID No. 41106B) with associated baffle-tower wet scrubber rated at a minimum of 20 gallons per minute liquid injection (ID No. SCR-1).

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(b) and (f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the listed emission sources shall be controlled by the fabric filters where applicable and the wet scrubbers at the required minimum liquid injection rate. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- ii. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - iii. Annual internal inspection will include inspection of spray nozzles, packing material, chemical feed system (if so equipped), and the cleaning/calibration of all associated instrumentation annually.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and scrubbers are not inspected, maintained, and operated at the minimum required injection rate.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the scrubbers; and

iv. Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the wet scrubbers within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 C.2.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02Q .0508(f) is below the limit given in Section 2.2 C.2.a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. Particulate Matter Sources

Building No. 8 – Analytical Development Laboratory and Pharmaceutical R&D Laboratory (ID No. B8):

Room P-5 Toxic material room: tablet blending and granulation (ID No. TMR) with associated high efficiency particulate Attenuation HEPA filter (ID No. 62044Z);

Room P-9 Toxic manufacturing room: tablet press (ID No. 01125) with associated high efficiency particulate Attenuation HEPA filter (ID No. CD62035Z);

Building No. 16 – Sterile Products Facility (ID No. B16):

Cytotoxic room air cleaning system for Room Nos. 4F109 and 4F111 (ID No. 96587) with associated fabric filter with 904 square feet of filter area with high efficiency particulate Attenuation HEPA filter (ID No. 96587);

Compounding room air cleaning system for Room Nos. 4F014, 4F015, 4F117, 4F118, 4F119, 4F126,

4F127, and 4F131 (ID No. 96588) with associated fabric filter with 3,616 square feet of filter area (ID No. CD96588);

Q/A Sampling room air cleaning system for Room Nos. 1F420 and 1F419 (ID No. 96586) with associated fabric filter with 904 square feet of filter area (ID No. CD96586);

30 Cytotox Rooms Nos. 2F318, 2F318A, 2F317, 2F316, 2F315, 2F319, 2F308, 2F308A, 2F313, 2F312, 2F311, 2F309, 2F310, 2F307, 2F306, 2F305, 2F304, 2F303, 4F112, 4F110, 4F108, 4F108A, 4F106, 4F103, 4F105, 4F102, and 4M002 (ID No. 96514) high efficiency particulate Attenuation HEPA filter (ID No. CD96514);

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from the sources listed above shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02Q .0508(f) and General Condition JJ. If the results of this test are above the limit given in Section 2.2 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the listed emission sources shall be controlled by the fabric filters. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. An annual (for each 12 month period following the initial inspection) visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters/HEPA filters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the bagfilters; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or delivered on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 C.2.a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02Q .0508(f) is below the limit given in Section 2.2 C.2.a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**E. DAP Process Heaters (ID Nos. F0951 through F0958);
DAP Hot Water Heaters (ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A,
HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B); and,
DAP Concentrators (ID Nos. S0936, S0937, S0961, S0942, S0943, S0944, S0945, S0970,
S0970B).**

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS

for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION (NO_x)

- a. In order to avoid applicability of 15A NCAC 02D .0530 for major sources and major modifications in attainment areas, total nitrogen dioxide emissions from the following affected sources shall not exceed 28 tons during any consecutive 12-month period:
- i. DAP process heaters (ID Nos. F0951, F0952, F0953, F0954, F0955, F0956, F0956B, F0957A, F0957B, F0958A, and F0958B);
 - ii. DAP hot water heaters (ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B); and,
 - iii. DAP concentrator heater (ID No. S0937).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. The Permittee shall keep monthly records of fuel usage at the affected sources in a logbook (written or in electronic format), as follows:
- i. The total quantity (in million scf) of natural gas fired in each affected source; and,
 - ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired in each affected source.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage are not created and retained as required above.
- c. Each calendar month, the Permittee shall calculate NO_x emissions from the affected sources for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
- i. Calculate NO_x emissions from the previous calendar month using the following equation:

$$E_{NO_x} = 20 * Q_{fo2} + 100 * Q_{ng,S0937} + 49.6 * Q_{ng,40ppm} + 18.6 * Q_{ng,15ppm}$$

Where,

- E_{NO_x} = NO_x emissions (in lbs) during the previous calendar month;
- Q_{fo2} = Quantity of No. 2 fuel oil fired at the affected sources during the previous calendar month (in 1,000 gal);
- $Q_{ng, S0937}$ = Quantity of natural gas fired at the affected concentrator heater (**ID No. S0937**) during the previous calendar month (in million scf);
- $Q_{ng, 40ppm}$ = Quantity of natural gas fired at the affected sources with a manufacturer guaranteed NO_x rating of 40 ppm (**ID Nos. F0951, F0952, F0953, F0954, F0955, HWH1, HWH2, HWH3, HWH4, and HWH5**) during the previous calendar month (in million scf); and,
- $Q_{ng, 15ppm}$ = Quantity of natural gas fired at the affected sources with a manufacturer guaranteed NO_x rating of 15 ppm (**ID Nos. F0956, F0956B, F0957A, F0957B, F0958A, F0958B, HWH6-A, HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B**) during the previous calendar month (in million scf).

ii. Sum the NO_x emissions from the affected sources for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in Section 2.2. E.1.a. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- d. Within 30 days after each calendar year half, the Permittee shall report the following information to the Regional Supervisor, Division of Air Quality:
 - i. Monthly emissions of NO_x emissions from the affected sources for the previous 17 months as calculated in Section 2.2. E.1.c.i. of this permit; and,
 - ii. 12-month rolling emissions of NO_x emissions from the affected sources for each of the six 12-month periods over the previous 17 month period as calculated in Section 2.2. E.1.c.ii. of this permit.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. In order to avoid applicability of 15A NCAC 02D .0530 for major sources and major modifications in attainment areas, total sulfur dioxide emissions from the following affected sources shall not exceed 39 tons during any consecutive 12-month period:
 - i. DAP process heaters (**ID Nos. F0951, F0952, F0953, F0954, F0955, F0956, F0956B, F0957A, F0957B, F0958A, and F0958B**);
 - ii. DAP hot water heaters (**ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B, HWH6-C, HWH6B, HWH7A, HWH7B, HWH8A, and HWH8B**); and,
 - iii. DAP concentrator heater (**ID No. S0937**).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. The Permittee shall keep monthly records of fuel usage at the affected sources in a logbook (written or in electronic format), as follows:
 - i. The total quantity (in million scf) of natural gas fired;
 - ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired; and,
 - iii. The fuel oil supplier certification for any fuel oil fired, including the sulfur content of the oil (in percent by weight).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and No. 2 fuel oil sulfur content are not created and retained as required above.

- c. Each calendar month, the Permittee shall calculate SO₂ emissions from the affected sources for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
 - i. Calculate SO₂ emissions from the previous calendar month using the following equation:

$$E_{SO_2} = 142 * S * Q_{fo2} + 0.6 * Q_{ng}$$

Where,

E_{SO_2} = SO₂ emissions (in lbs) during the previous calendar month;

- S = Sulfur content in the No. 2 fuel oil (in percent by weight);
 Q_{fo2} = Quantity of No. 2 fuel oil fired at the affected sources during the previous calendar month (in 1,000 gal),
 Q_{ng} = Quantity of natural gas fired at the affected sources during the previous calendar month (in million scf)

ii. Sum the SO₂ emissions from the affected sources for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in Section 2.2. E.2.a. of this permit.

Reporting [15A NCAC 02Q .0508(f)]

- d. Within 30 days after each calendar year half, the Permittee shall report the following information to the Regional Supervisor, Division of Air Quality:
- i. Monthly emissions of SO₂ emissions from the affected sources for the previous 17 months as calculated in Section 2.2. E.2.c.i. of this permit; and,
 - ii. 12-month rolling emissions of SO₂ emissions from the affected sources for each of the six 12-month periods over the previous 17 month period as calculated in Section 2.2. E.2.c.ii. of this permit.

F. Facility-wide

1. 15A NCAC 02D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 02D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, the Permittee shall:
 - i. Store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - ii. Clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - iii. Store wipe rags containing volatile organic compounds in closed containers,
 - iv. Not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - v. Transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - vi. Clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 02D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
 - i. Flush parts in the freeboard area,
 - ii. Take precautions to reduce the pooling of solvent on and in the parts,
 - iii. Tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - iv. Not fill cleaning machines above the fill line,
 - v. Not agitate solvent to the point of causing splashing. [15A NCAC 02D .0958(d)]

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0958.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each inspection; and

- ii. The results of each inspection noting whether or not noncompliant conditions were observed. If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0958.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS

for 15A NCAC 02D .1111: Maximum Available Control Technology (MACT) Standards

- a. In order to remain classified a minor source for hazardous air pollutants (HAP) and avoid applicability of 15A NCAC 02D .1111, "Maximum Achievable Control Technology," facility-wide HAP emissions shall be less than the following limitations:
 - i. 25 tons per consecutive 12-month period of total, combined HAP; and,
 - ii. 10 tons per consecutive 12-month period of any individual HAP.

Testing [15A NCAC 02Q .0508(f)]

- b. Within 180 days of initial start-up of the control device, the Permittee shall conduct a performance test of the fiber processing area scrubber (**ID No. V-0932**) to determine the overall control efficiency (including capture and recovery efficiencies) for triethylamine (TEA) emissions from Fiber Line No. 5 (**ID No. FL-5**) and establish the minimum liquid-to-gas ratio that is required to achieve the triethylamine reduction. The testing shall be performed in accordance with U.S. EPA Method 26A and General Condition JJ. In addition to the requirements in the General Conditions, the Permittee shall record and report:
 - i. The parameter monitoring results (i.e., liquid-to-gas ratio) averaged over the full period of the performance test;
 - ii. The total, uncontrolled TEA emissions (in lbs) from Fiber Line No. 5 (**ID No. FL-5**) for the full period of the performance test, estimated using a mass balance and assuming 100% of TEA solvent is emitted;
 - iii. The total quantity of TEA captured at the scrubber (in lbs) for the full period of the performance test, as measured at the inlet duct to the scrubber;
 - iv. The total quantity of TEA emitted from the scrubber (in lbs) for the full period of the performance test, as measured at the outlet duct from the scrubber;
 - v. The capture efficiency of the scrubber, estimated from the uncontrolled TEA emission rate and the measured TEA capture rate (in % by weight);
 - vi. The reduction efficiency of the scrubber, estimated from the measured TEA capture rate and outlet TEA emission rate at the scrubber (in % by weight); and,
 - vii. The overall reduction efficiency of the scrubber, estimated as the product of the capture and reduction efficiencies (in % by weight).

If the test is not conducted within 180 days of initial startup, the Permittee shall assume that there is no TEA emissions control (i.e., control efficiency = 0% by weight) when estimating total, facility-wide HAP emissions, as required in Section 2.2.F.2.f. below. Further, any HAP emissions calculations that have been completed assuming the 59.4% TEA control efficiency shall be revised to reflect that there is no TEA emissions control.

Inspections [15A NCAC 02Q .0508(f)]

- c. The Permittee shall perform inspections and maintenance of the scrubber (**ID No. V-0932**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum the inspection and maintenance requirement shall include:
 - i. An annual visual inspection of spray nozzles to detect clogging or corrosion damage of nozzles; and,
 - ii. An annual visual inspection of the demister pads to detect fouling.
 The date and results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

Operating Standards/Monitoring [15A NCAC 02Q .0508(f)]

- d. To demonstrate that the scrubber (**ID No. V-0932**) is achieving the demonstrated TEA control efficiency, the daily average liquid-to-gas ratio at the scrubber shall be maintained above the minimum operating range established during the performance test required in Section 2.2.F.2.b. above.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall install, calibrate, maintain, and operate monitoring devices to monitor the liquid-to-gas ratio at the scrubber (**ID No. V-0932**) and record the daily average liquid-to-gas ratio of the scrubber (**ID No. V-0932**) for each day it is operated. If the scrubber is not operated or the liquid-to-gas ratio does not meet the minimum operating range, the Permittee shall assume no emissions control (i.e., 0% by weight) at Fiber Line No. 5 (**ID No. FL-5**) when estimating total, facility-wide HAP emissions, as required in Section 2.2.F.2.g. below.
- f. Each month, the Permittee shall calculate and record facility-wide emissions of each, individual HAP and total, combined HAP during the previous calendar month and during the previous consecutive 12-month period.
 - i. HAP emissions from the uncontrolled PE Sheet Lines (**ID Nos. PES-1 through PES-6**) shall be based on a mass balance, assuming 100% of solvent is emitted to the atmosphere.
 - ii. HAP emissions from the uncontrolled fiber lines (**ID Nos. FL-1 through FL-4, FL-6 through FL-8**) shall be based on a mass balance, assuming 100% of solvent is emitted to the atmosphere.
 - iii. HAP emissions from the controlled fiber line (**ID No. FL-5**) shall be based on a mass balance, assuming 100% of solvent is emitted to the atmosphere, except for TEA emissions which shall be estimated as follows:
 - (A) When the scrubber is not in operation, the Permittee shall assume no emissions control (0% by weight);
 - (B) When the scrubber is operating, the Permittee shall apply an overall TEA control efficiency as follows:
 - (1) Prior to the required performance test, assume 59.4% by weight when the scrubber is operating. These emissions calculations shall be revised to reflect the actual, measured control efficiency after the completion of the stack test.
 - (2) After the required performance test, apply the measured overall control efficiency when the daily average liquid-to-gas ratio is equal to or above the minimum operating range determined by the test.
 - (3) After the required performance test, assume 0% emissions control when the daily average liquid-to-gas ratio is below the minimum operating range determined by the test, or when the liquid-to-gas ratio is not measured and recorded.
 - iv. HAP emissions from all other emissions sources shall be estimated in accordance with the terms of this permit.

The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if any individual or combined 12-month rolling HAP emission rate exceeds as limit in Section 2.2.F.2.a. of this permit or if the monthly HAP emissions are not calculated and recorded as provided above.
- g. The Permittee shall keep records of the MACT applicability determinations, as provided above, on site for a period of **five years** after the determination, or until the source becomes an affected source. The determination must include the analysis demonstrating why the Permittee believes the source is unaffected pursuant to 40 CFR Part 63.10(b)(3). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- h. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following information:
 - i. The greatest individual HAP emission rate (in tons) for each of the six consecutive 12-month periods ending during the previous calendar half; and,
 - ii. The total, combined HAP emission rate (in tons) for each of the six consecutive 12-month periods ending during the previous calendar half; and,
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:**3. 15A NCAC 02D .1100 TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT**

Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the modeled source by source (unless noted differently) emission limits for formaldehyde and toluene listed in the table below shall not be exceeded. In order to ensure compliance with these regulations the Permittee shall maintain records of production rates, throughput, material usage, and other process operational information as is necessary to determine compliance with the air toxic emission limits specified below for a minimum of five years from the date of recording.

Emission Source ID No. or Group	Emission Source Description	Formaldehyde (lb/hr)	Toluene 1HR (lb/hr)	Toluene 24HR (lb/hr)
B16-SPF	Building 16 - Sterile Products Facility Group	2.2	159	159
SDFD	Solid Dose Formula Group	2.4E-02	317	119
B7NIX	Building 7 Nix Group	8.0E-03	39.7	0.119
DRUGSTCK	Building 1 Drug Stock Group	8.0E-03	39.7	119
B8	Building 8 Group	1.6E-02	159	32.9
SPDFORM	Sterile Products Dept. Formaldehyde Vent (Bldg. 1) Group	7.1E-01	7.9E-02	2.4E-01
47819	Building 1 M2-84	2.4E-02	159	357
B8A	Laboratory Building 8A Group	3.6E-02	39.7	15.9
B11	Building 11 Group	4.0E-02	79.4	59.5
FL1&2	Building 12 IMP1	1.0E-02	9.99	8.96
FL3&4	Building 12 IMP2	1.0E-02	9.99	8.96
FL7 & 8	Building 12	1.0E-02	9.99	8.96
NOBasins	North Organic Basin (Area Source)	4.0E-02	1.2E-01	1.2E-01
B&OEqual	Barometric/Organic (Area Source)	1.1E-01	9.13	7.2E-01
1	Boiler 1	1.7E-04	7.5E-06	7.5E-06
2	Boiler 2	1.7E-04	7.5E-06	7.5E-06
3	Boiler 3	1.6E-04	7.4E-06	7.4E-06
4	Boiler 4	2.8E-03	1.3E-04	1.3E-04
Temp	Temporary Boiler	1.3E-03	2.2E-04	2.2E-04
CF(1A-1B)	Cogeneration No.1A and 1B	7.8E-05	3.5E-06	3.5E-06
F0935	RTO DAP 1-3	4.4E-04	2.0E-05	2.0E-05
F0962	RTO DAP 4-5	2.5E-04	1.1E-05	1.1E-05
F0972	RTO DAP 6	5.6E-05	2.6E-06	2.6E-06
F0972B	RTO DAP 6B	4.4E-04	2.0E-05	2.0E-05
F0938	RTO DAP 7A and 7B	4.4E-04	2.0E-05	2.0E-05
F0939	RTO DAP 8A and 8B	4.4E-04	2.0E-05	2.0E-05
S0936	Concentrator DAP 2-3	4.4E-04	2.0E-05	2.0E-05
F0951	Hot oil furnace (HOFDAP 1)	1.7E-04	7.6E-06	7.6E-06
HWH1	Hot water heater (HWH DAP 1)	3.7E-05	1.7E-06	1.7E-06
F0952	HOF DAP 2	1.6E-04	7.3E-06	7.3E-06
HWH2	HWH DAP 2	1.2E-06	5.3E-08	5.3E-08
F0953	HOF DAP 3	5.4E-09	2.5E-10	2.5E-10
HWH3	HWH DAP 3	3.8E-05	1.7E-06	1.7E-06
F0954	HOF DAP 4	2.1E-04	9.6E-06	9.6E-06
HWH4	HWH DAP 4	2.8E-05	1.3E-06	1.3E-06
F0955	HOF DAP 5	3.5E-04	1.6E-05	1.6E-05
HWH5	HWH DAP 5	3.8E-05	1.7E-06	1.7E-06
F0956	HOF DAP 6	1.7E-04	7.7E-06	7.7E-06
HWH6-A	HWH A DAP 6	2.0E-05	9.0E-07	9.0E-07
HWH6-B	HWH B DAP 6	2.0E-05	9.0E-07	9.0E-07
HWH6-C	HWH C DAP 6	2.0E-05	9.0E-07	9.0E-07

F0956-B	HOF DAP 6B	3.5E-04	1.6E-05	1.6E-05
HWH6B	HWH DAP 6B	3.8E-05	1.7E-06	1.7E-06
F0957A	HOF DAP 7A	3.5E-04	1.6E-05	1.6E-05
F0957B	HOF DAP 7B	3.5E-04	1.6E-05	1.6E-05
HWH7A	HWH DAP 7A	3.8E-05	1.7E-06	1.7E-06
HWH7B	HWH DAP 7B	3.8E-05	1.7E-06	1.7E-06
F0958A	HOF DAP 8A	3.5E-04	1.6E-05	1.6E-05
F0958B	HOF DAP 8B	3.5E-04	1.6E-05	1.6E-05
HWH6B	HWH DAP 8A	3.8E-05	1.7E-06	1.7E-06
HWH6B	HWH DAP 8B	3.8E-05	1.7E-06	1.7E-06
I-MAP-H1	Hot water heater medical 1	6.5E-05	2.9E-06	2.9E-06
I-MAP-H2	Hot water heater medical 2	6.5E-05	2.9E-06	2.9E-06
C-0901	Solvent Recovery	0.0E+00	3.32	1.6E-01

STATE-ENFORCEABLE ONLY**4. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

SECTION 3 - GENERAL CONDITIONS (version 4.0 12/17/15)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NO_x budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.

4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. Duty to Provide Information (submittal of information) [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. Duty to Supplement [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. Retention of Records [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for

expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

- CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
 2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
 3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR § 82.166. Reports shall be submitted to the EPA or its designee as required.
- DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.
- EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) - FEDERALLY-ENFORCEABLE ONLY**
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.
- FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.
- GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.
- HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).
- II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.
- JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:
1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
 2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.

3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - (1) Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - (2) Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - (3) Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond

the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St. SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound